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ABSTRACT

This report focuses on the experiences of a group of high school dropouts who participated in two experimental programs; one of which offered courses leading to a high school diploma and the other which offered skill training in one of three occupational areas. The programs were conducted to test whether obtaining a diploma or skill training increased the employment opportunities of former dropouts. A 33 month followup study was made of those who participated as well as of comparable groups of young people. Removal of barriers to employment represented by the absence of a high school diploma did not increase employment opportunities for either the subjects on the comparison group attending regular high school. It appears that it was not the inadequacies of preparation these young people received that limited their opportunities as much as the general lack of employment opportunities available to youngsters with their background--that is, structural limitations in our society. The recommendation is made that training be conducted only when each trainee can be guaranteed a satisfactory job placement, and that future programs focus on improving job skills without the rhetoric of rehabilitation. (Author/CJ)

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THE HIGH SCHOOL DIPLOMA: CREDENTIAL FOR EMPLOYMENT?

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Naturally, none of the above-named persons can be held responsible for the content of this report. That responsibility, together with the interpretations and conclusions, remains with the authors.

Jacob J. Kaufman

Morgan V. Lewis

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CHAPTER 1

INTRODUCTION

In 1965, when this study was begun, the effort to prevent high school dropouts was one of the main concerns of the poverty program. It was being amply demonstrated that dropouts were unemployed for longer periods of time and earned less income when they were employed. High school students were exhorted to stay in school or, if they had left, to return. The Neighborhood Youth Corps and the Jobs Corps were created to give young people a "second chance." Seven years later, in 1972, the word "dropout" is heard much less frequently. "Anti-dropouts" (Bachman, et al., 1971) campaigns are still conducted by the media, mainly TV, but the topic does not command the public interest it once did.

Does this mean that the problem no longer exists? Have the lessons of the past seven years allowed us to defuse the "social dynamite" that Dr. Conant saw smoldering in the poverty areas of our large cities? Hardly. If there has been any change in the quality of education available in large cities, it has probably been further deterioration (Havighurst, et al., 1970). Many young people who heard and believed the stay-in-school slogans found that their education was a sham and their diplomas had little meaning. Some students of manpower, notably Ivar Berg (1970), have begun to question how much education and training is really necessary for effective performance of the vast majority of jobs in the economy. A study (Wiener, 1968) from the U. S. Department of Labor noted that well over one-third of the total work force of this country still lacks a high school diploma. Even before this scholarly skepticism, however, public and governmental interest had begun to wane. The War on Poverty which introduced dozens of innovative, experimental programs is never mentioned. Efforts to evaluate these complex programs have yielded complex, equivocal results and some observers (e.g., Jensen, 1969; Moynihan, 1969) have concluded that they were failures. Most of the residential training centers of the Job Corps have been abolished. Funds for many other poverty programs have been reduced or eliminated. The primary domestic concerns of the nation now center on crime, drugs, taxes, bussing for school integration, and the conflicts of values reflected in the generation gap, the silent majority, the radical left, and women's liberation, to name some of the most prominent.

The focus changes but the problems remain. Most of the issues listed are symptoms of the inequality of opportunity in our society. And it is this inequality that contributes to the conditions that produce school dropouts. Students who leave school of their own choice, not because of pregnancy or repeated expulsions, usually do so because the school is fulfilling few, if any, of their needs. They have heard many times that staying in school "pays off" but they doubt whether that message applies to them. And often their doubts are justified.

The public schools, probably more than any other institution in our society, try to offer equal opportunity to all of their students. Yet there can be little doubt that the real opportunities available to a student from a middle-class home with verbal parents, who encourage and reward academic performance, are far greater than they are to a child born and raised in poverty. And it is from poverty settings that the majority of dropouts come. Early in his school career the future dropout typically finds that the skills and life style which serve him well in his family and peer group are at odds with the requirements of the school. School becomes a long succession of boring, frustrating experiences where he is forced to perform meaningless tasks. If his boredom and frustration occasionally lead to outbursts of aggression, he is labeled a troublemaker and kept under the careful scrutiny of the school's discipline officer and assigned to the teachers who "know how to handle his kind." It is little wonder that many young people frequently avoid this environment through absenteeism and leave it permanently as soon as they may legally do so.

What happens to the young person who leaves school without a diploma? The poorer employment and earnings histories of dropouts have been documented many times. The interim report on the present project, The School Environment and Programs for Dropouts, summarized many of the data that were available as of August 1968. More recent data (Hayghe, 1972) show the same pattern: dropouts have lower labor force participation rates and higher rates of unemployment among those in the labor force. Miller (1966) has shown that in 1965 male high school graduates who did not go on to college averaged about $1,000 a year more income than dropouts who had attended but not completed high school, and about $2,000 more than dropouts who never attended high school.

These comparisons of aggregate data fail, however, to control for the other characteristics of the individuals being compared. Whether or not an individual completes high school is related to many other factors, the most important of which are academic ability, and family background. These factors also influence employment experiences and, therefore, it has been impossible to determine the relative importance of school completion. The present study was conducted to overcome these limitations.

The Issues

Credentialism: The main objective of this study was to test the hypothesis of "credentialism" primarily advanced by Miller (1964, 1967), who has indicated that throughout our society people are being evaluated not on the basis of performance but with respect to the credentials they hold. The high school diploma is the basic credential. Miller contends that the dropout is not really worse off than the graduate because he knows less, or is less able to do a job, but because his lack of a diploma bars him from jobs he could otherwise perform. In Miller's view it is this discrimination against the dropout that is the real problem, not necessarily his personal characteristics or lack of ability.

To make the purest test of this hypothesis, the ideal method would have been to select a group of dropouts, awarded half of the group diplomas at random, and then studied the subsequent employment experiences of the total group. This, of course, was impossible: no agency accredited to award a diploma would do so without justification. It was decided, therefore, to conduct a program in conjunction with a high school which would offer the credit equivalents of three years of high school. The school would enroll only those dropouts who had completed at least the ninth grade before leaving school. The credits they had acquired previously plus those to be earned in the program would enable them to be awarded high school diplomas. The employment experiences of the subjects who received diplomas were to be compared to those of the subjects in other groups. The composition of these other groups was determined by another issue the study was designed to examine: the relative value of general education compared to specific skill training.

General Education or Skill Training: One of the most debated issues in education is the importance of occupational training to jobs and earnings. The advocates of a general education argue that the role of the school is to give its students a foundation in the skills of communication and an understanding of the history and the traditions of their culture. Training in specific occupational skills should be left to employers. Proponents of occupational training do not deny these functions but add that the school has a responsibility to give each student who desires it the opportunity to learn a salable skill. Many students are bored by the verbal emphasis in academic classes and require other means and methods for learning. Training in occupational skills has meaning for such students which verbal abstractions lack.

The debate has continued for years, but most students have decided in favor of general education, either in its elite, college preparatory, version or in the diluted general curriculum which is the catchall for students who are neither college preparatory or vocational. The preference for a general education seems to stem from the cultural emphasis on a college education as the surest route to a rewarding life. Many students who are incapable of handling the college preparatory courses and quite unlikely to enter college take the general curriculum for it, more so than the vocational track, maintains the possibility of college attendance. Since most young people of high school age are unsure of the occupation they would like to follow, the general curriculum allows them to postpone career decisions.

Relatively few general curriculum students ever continue on to college. Instead they enter the labor market without training in employable skills. Some observers (e.g., Venn, 1970) contend that this is one of the major causes of the high rates of unemployment among young people. If this is the case, an obvious way to overcome it is to provide skill training. Training programs have thus evolved for out-of-school young people. Even the Neighborhood Youth Corps, which was originally established as a work-experience program ". . . gradually evolved into one in which skill training is conceived as of prime importance." (Manpower Administration, 1970, p. 11) There have been few attempts, however, to compare a general education program that yielded a diploma to a skill training program of similar length and quality that did not yield a diploma but produced a marketable skill.

The Study Design

It was, therefore, decided that the other experimental group in the study would be a skill training program. The post-program experiences of the subjects who received the training would be compared to those of the subjects in the general education (diploma) program and with several other groups of subjects with similar characteristics. These comparisons would allow an assessment of the relative value of the possession of a high school diploma versus skill training.

The comparison groups to be selected to complete the design were from two other sources. One, the control group, consisted of high school dropouts who received no additional education or training after they originally left school.[1] These subjects were recruited to take part in the study through the offer of monetary incentives and the chance to participate in a "vocational guidance program." The program was minimal in nature and consisted of the interpretation of test results and of attempts to help the subjects identify areas of vocational interest.

Regular high school seniors who were graduated in June 1966 made up two other comparison groups: one consisted of graduates from the general curriculum and the other of graduates from the vocational curriculum. These subjects were selected from the largest high school in the area where the study was conducted. The subjects were selected in May 1966 to match the 119 subjects in the experimental programs that month. The matching was based on race, sex, curriculum, and IQ.

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[1] Any mention of the control group refers only to these subjects--dropouts who received no additional education or training. The control subjects plus those who completed or withdrew from the diploma and skill programs are sometimes referred to as the dropout or experimental subjects in contrast to the regular high school graduates.

The final two comparison groups consisted of the subjects who withdrew from each of the experimental programs. Both of these programs were lengthy and made considerable demands on the time of their students. Their classes met four hours a night, five nights a week, from October 4, 1965 to September 30, 1966--a total of 250 class days. Both lost many students. In the diploma program 60 of the 115 enrollees (52 percent) completed it; in the skill training program 29 of the 128 enrollees (23 percent) completed it.

These seven groups thus represent all the subjects studied in this project. Five of the groups were composed of high school dropouts: the completers of the two experimental programs, the subjects who withdrew from these programs, and the control group of dropouts who received no training or education. The other two groups were regular high school graduates from the general and vocational curriculums who were selected to match the experimental subjects as closely as possible.

When the experimental phase of the project ended, all subjects were followed up for a period of thirty-three months. Two waves of interviewing were conducted, the first at approximately sixteen months and the second at thirty-two months. These interviews concentrated primarily on the employment experiences of the subjects but other questions on self-evaluation, additional education, political awareness, and media usage were also included to assess other effects of the programs.

Overview of the Report

This report presents the results of these interviews. Chapter 2, which summarizes the experimental phase of the project, describes the characteristics of the subjects and the program effects as measured by pre- and post-testing. There is considerable evidence that the dropout subjects were mainly from low income backgrounds. Their families were large, and many had one parent, usually the father, missing. Even in those families with a father present, the mother was typically the dominant parent. Although the subjects perceived their parents to be favorably inclined toward school and disappointed when they withdrew, many of their brothers, sisters, and close friends had also failed to complete high school. The pattern of school withdrawal among family and friends was most pronounced among the subjects in the skill training program. The regular high school graduates had been selected to be as comparable as possible to the dropouts. Nevertheless, they came from slightly more favorable family settings. Their families were smaller and more likely to be intact with the father working than were the families of the dropouts.

Although the attempt was made to conduct programs of equal quality, one emphasizing a general education and the other skill training, it was not possible to do so. The interim report on the project describes and analyzes at length the differences that developed in them. By any measure the diploma program was superior. It had a much better retention rate, the academic performance of its students improved, and they were more positive about their experiences in the program. These results are summarized in Chapter 2.

The superiority of the diploma program during the experimental phase of the study did not continue into the follow-up period. There were two major topics covered in the follow-up interviews: work histories and attitudinal, educational and citizenship variables, such as self-esteem; additional education, and political awareness, that the programs might have influenced. The indices of employment experiences are reported in Chapter 3 and the other measures of the programs' effects in Chapter 4.

Extensive work histories were compiled for each subject interviewed. These covered all regular jobs, part-time or full-time, the respondent held from the start of the program up to the date of the interview. The subjects were asked the kinds of jobs they held, how these jobs were obtained, rates of pay, degree of job satisfaction, relationship between training and job duties, and so on. In general there was no consistent pattern indicating that obtaining a diploma or specific skill training was associated with better labor market experiences. If there was any advantage on most of these indices, it usually lay with the control subjects, those dropouts who received no additional education or training, or with the dropouts from the experimental diploma program. These groups were slightly more heavily weighted with white males and analysis showed it was their sex, more so than any credential or training, that most influenced their employment experiences. There was some indication that the graduates of the diploma program were less satisfied than the other subjects. This raises the speculation that one of the effects of the diploma program may have been to raise expectations without actually providing the means needed to fulfill the expectations.

The data on other possible effects of the experimental programs also failed to indicate any consistent differences which were associated with the completion of the programs. This finding was especially surprising for the subjects who received their diploma through the experimental program. It was thought that the success this program had with its subjects would be reflected in such things as increased self-confidence and greater political awareness. However, the data gathered on these and other variables did not reveal such differences. Whenever differences were found, they indicated that the regular high school graduates were different from all the dropout subjects. The experimental subjects who received diplomas did not demonstrate political awareness, nor did they continue their education, at the same level as the regular graduates. Apparently the complex of environmental and personal factors that led to the initial decision to withdraw from school was still reflected in the differences observed in these variables.

The data available from these subjects would thus cause the credentialism hypothesis to be rejected. Neither obtaining a diploma nor completing a skill training course appeared to increase the employability of the dropouts who served as subjects in this study. Nor do these results yield support for the claims made for the "broadening" effects of general education. What the data do lead to is a serious questioning of the assumption upon which much of the poverty program is based--the assumption that overcoming educational handicaps increases the opportunities open to an individual.

What this study demonstrated more than anything else is that, for young people from poverty environments, obtaining a diploma is not the employment gate-opener it is often claimed to be. The diploma is only one sign indicating that the individual who possesses it probably has a variety of other characteristics that make him more attractive to an employer, and that the status of his family makes more options open to him. Young people who obtain diplomas are more likely to be from families who can provide post-high school education or training, who can facilitate acceptance of the young people into a union, who are part of an informal referral system that can lead to attractive jobs, and so on. Youngsters who do not have the preferred middle-class characteristics and whose families cannot assist them in their job seeking are at a disadvantage in the labor market whether they have diplomas or not.

These structural limitations on the opportunities open to the children of the poor raise doubts as to the degree to which education can assist upward mobility. There can be little doubt, however, that as public education is presently conducted, it can serve only those who can accommodate themselves to its requirements. And these requirements frequently put the poor child at a disadvantage. The meaningless of the activities, the verbal emphasis, the rigidity of the rules, all require a particular type of preparation and support if the child is to endure them. And often poor families do not provide the kind of training or support that is necessary.

In Chapter 5 the functions that education serves in society are discussed in greater detail. It must be recognized that, in addition to its role in assisting the development of the individual, education also serves an allocative and selective function. Youngsters are identified and prepared for their future occupational roles. In many cases, unfortunately, this preparation consists of convincing young people that they are less able and less worthy than their more academically adept classmates and should, therefore, set modest goals for themselves. Because the children of the poor are handicapped in academic competition, the schools tend to perpetuate the existing stratification of society.

If the schools are to provide equal opportunity new styles of education must be adopted. The diploma program conducted during the experimental phase of this program demonstrated that a school setting does not have to be oppressive and alienating. The kinds of change needed to create a supportive environment are discussed. Even with a supportive environment, however, the schools will not reach those students who are bored and frustrated by traditional academic courses unless changes are made in the total approach to education. Suggestions are presented for achieving a shift from the subject-centered, teacher-oriented approach that is meaningless to so many students.

Implementing the recommended changes in education is, needless to say, an enormous task, and even if they could be carried out, there will still be people who will need a second or third chance to acquire the skills necessary for a reasonable existence in our society. And since the results of this study indicated that education without access to opportunities has little effect, recommendations are made for increasing opportunities through guaranteed placement and job creation.

CHAPTER 2

THE DESIGN OF THE STUDY

This chapter presents the necessary background on the total study which is required for an understanding of the specific follow-up results presented in this report. The characteristics of the subjects who took part in the study are described. The experimental programs conducted for these subjects--classes, attendance and completion rates--are presented. The data gathered to evaluate the effects of these programs are summarized. These results indicate the skill training program fell far short of the goals set for it. Its completion rate was less than half of the diploma programs and it failed to produce significant improvement in academic ability or self-evaluations.

All of the subjects--the program completers and dropouts, the controls, and matching groups of regular high school graduates--were followed up for thirty-three months after the completion of the experimental programs. Two rounds of interviews were conducted during this period. Attempts were made to interview all subjects but over one-third could not be completed. The completion rates and characteristics of the interviewed and non-interviewed subjects are presented in the final section of the chapter.

THE SUBJECTS

Family Environment

The first set of follow-up interviews (1967) yielded the most complete data on the family background of the subjects. Data on these characteristics had been obtained at other times during the experimental phase of the study, but the 1967 follow-up yielded the most complete results. The description of family situations presented below, therefore, was obtained a year or more after the programs ended, but in most cases reflects conditions that were present during the experimental phase.

Although an attempt was made to match the regular high school graduates to the experimental subjects, the socioeconomic status of the regular graduates was slightly higher. There were among the regular graduates, for example, more families with both parents present and 43 percent of their fathers had completed high school compared to 12 percent for the other subjects. The differences among the various dropout groups were not as striking as the difference between them and the regular graduates. The families of graduates from the skill training program were, however, less intact than the families of the other dropout subjects. Over half of the subjects in this group did not know how far their fathers went in school and only about one-third reported that their fathers were employed (an additional 30 percent could not answer this question). The proportion of fathers employed among the other dropouts was 67 percent compared to 85 percent for the regular high school graduates.

The average earning of those fathers who worked was about $6,000 to $7,000 per year. Their mean wage ranged from $2.90 to $3.39 per hour among groups. The differences were not significant but the fathers of regular graduates did earn higher rates than the fathers of the dropouts. Job tenure among the employed averaged almost 20 years. About one-fourth of the mothers of the subjects also worked. The proportion was highest among the graduates of the skill training program (38 percent).

Despite the objective evidence of considerable family instability, in all groups more than 80 percent of the subjects reported that their families understood and accepted one another. The matriarchial dominance prevalent in many poverty families was reflected in the subjects' replies to the question: "Which member of your family do you feel closest to?" Most replied their mothers, with a sibling mentioned next most frequently. Very few felt closest to their fathers.

The subjects also most frequently responded that their mothers had been the single most important person in their lives, and had had the most influence on decisions about schooling. On both questions the regular high school graduates tended to mention their fathers or both parents more often than subjects in the other groups. In this regard the regular graduates also differed from the dropouts.

When asked whether their parents tried to get them to go to school and to study, or whether they thought school and studying were a waste of time, eighty-nine percent of all the subjects reported that their parents had a positive orientation toward school. The proportion that reported this positive orientation ranged from 79 percent in the control group to 98 percent among the regular high school graduates from the general curriculum, but the high school graduates did not differ significantly from the other groups. Most of the dropouts (85 percent) reported their parents were either angry, sad, or both when told of their intention to leave school. This also demonstrates that the parents of the dropouts supported the goal of having their children complete high school. There was some evidence that this support was more than lip service. Over half of the subjects in all the dropout groups had brothers or sisters who had graduated from high school. Once again, however, the difference between the regular high school graduates and the dropouts was apparent. Among the regular graduates only about one-fourth of the siblings had withdrawn.

Another indication of the difference between the regular graduates and dropouts was smaller family size. The average number of brothers and sisters in the dropout groups was 4.8 compared to 3.9 among the regular graduates. The subjects who completed the skill training program came from the largest families, averaging 5.7 siblings.

The subjects were asked how their parents felt about their signing up for the Penn State program. In the control group, where active participation was minimal, 74 percent reported that their parents were happy with their decision. This was the lowest of all groups. Among the other experimental subjects almost all, 94 percent, replied that their parents were pleased that they had signed up. The lower percentage of "happy" parents in the control group was probably due to the limited benefits which the control program offered. On all questions regarding education most of the subjects perceived that their parents were concerned with their education and wanted them to obtain additional schooling.

Among those subjects who were married, an inquiry was made concerning the attitudes of their spouses toward their signing up for the Penn State program. Except for those who withdrew from the skill training, where only one-third felt their spouses were favorable, all other groups had half or more of their subjects giving this answer. If the spouses were not happy, their main response was indifference. Very few if any of the groups reported that their spouses were angry or sad. The more negative attitude toward the program found among the spouses of the skill training dropouts may have influenced their decision to leave the program. The married subjects were then asked to what degree their spouses supported and encouraged their involvement in the Penn State program, and here a significant difference was found between those who completed the diploma and the skill programs. Sixty-five percent of the former reported being encouraged compared to only 33 percent of the latter. Although the two groups of program dropouts did not differ significantly, fewer from the skill training program reported that their husbands or wives had encouraged involvement in the Penn State program.

Participation in the Penn State program did not appear to have been disruptive to family relations. More than two-thirds of the experimental subjects reported that their family relations were the same at the time of the follow-up interview as they had been during the program, and the rest said relations were better. Among the regular high school graduates, half reported better family relations at the time of the interviews than during high school. It is quite likely that this improvement found among the graduates is due to their having matured somewhat.

The pattern of school completion among the close friends of the subjects was similar to the pattern among their siblings. Virtually all of the close friends of the regular graduates had also completed high school, but about one-fourth to one-half of the close friends of the dropouts had not. The subjects in the skill training groups--both completers and program dropouts--had the largest proportions of friends who had not finished school.

There were no major differences among any of the groups with regard to the percentage of friends or family who had taken additional training outside of regular school. Half or more of all the subjects reported that someone they knew well had done so, and of those who took the training about two-thirds completed it.

Many of the ways in which the backgrounds of the dropouts differed from those of the regular high school graduates indicate conditions which seem to have predisposed them toward school withdrawal. There were many families with one parent missing, a tendency to maternal dominance, and many brothers and sisters who also had not completed school. While none of these conditions by itself causes school withdrawal, they do suggest the type of environment in which the contributing causes are rooted. It should be recalled that the regular graduates were selected to match the dropouts as closely as possible on race, sex, curriculum and IQ, and were among the lowest achievers in their graduating class. It seems very likely that if higher achieving students had been selected, the differences would be much sharper.

Reason for School Withdrawal

The actual reasons which the subjects gave for leaving school are presented in Table 1. Marriage and pregnancy were the dominant reasons among females. In almost all cases the marraiges were forced because of pregnancy. The major reasons among the male subjects were disagreements with teachers and school administrators and a dislike of school. Excluding pregnancy, the primary causes leading to withdrawal, as seen by the dropouts themselves, stemmed from their incompatibility with the school environment.[1] There is probably some degree of "face-saving" in these answers. Few subjects who repeatedly failed courses were willing to tell the interviewers that these failures were the reason they left school. In support of the reasons given, however, it should be noted that the IQ data reveal that most of the subjects were capable of adequate school performance as, indeed, many of them showed in the experimental programs. Undoubtedly, the incompatibility of the school environment exerted considerable influence on the decision to leave. Finally, a minority of subjects, fewer than 10 percent, said their decision to withdraw was caused by the attraction of, or need for, a job and money.

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[1] Another investigation has concluded that dropping out signifies problems involving, ". . . a serious mismatch between some individuals and the typical high school environment." (Bachman et al., 1971, p. 171)

TABLE 1

Primary Reasons Given by Subjects for Dropping Out of High School

Reason For Dropping Out	Diploma Completers	Skill Completers	Controls	Program Dropouts
	%	%	%	%
Marriage or pregnancy	43	52	21	20
Family responsibilities	2	4	4	8
Disagreements with teachers or administrators	18	16	23	22
Poor or failing grades	10	8	6	8
Disliked subjects	4	4	--	1
Disliked school	12	8	17	14
Friends dropped out	4	--	3	4
Money or job	--	--	4	4
Other	6	8	20	19
No answer or do not know	2	--	2	1
Number	51	25	66	80

The reasons given by the subjects in this study are somewhat different than those found by other investigators. Most agree on the importance of the family and school environment, but other studies reviewed by Chansky (1966) tend to put greater emphasis on the immediate financial incentives to withdrawal. Almost all studies agree that the general pattern of poverty, unstable family, and early sexual activity constitutes a breeding ground for the conditions that later lead to school withdrawal. A lack of family understanding and acceptance, and negative family and peer attitudes toward education and school, often found among dropouts (Cervantes, 1965), were not characteristic of the subjects in this study. The willingness of these subjects, however, to participate in the study suggests that they were not among the extremely alienated young people who reject all institutions of the larger society; instead, they were still trying to achieve through accepted channels.

SUMMARY OF THE EXPERIMENTAL PHASE

The educational programs which the subjects attended are described in detail in the report on the experimental phase of the project titled The School Environment and Programs for Dropouts, which was published by the Institute for Research on Human Resources in 1968. This section summarizes the major details of that phase of the project.

Recruiting Subjects

The subjects were recruited during August and September 1965 from lists of former students provided by high schools in the area where the study was conducted. The total list contained approximately 1,200 names of students who had withdrawn from high school during the preceding two years. A letter was sent to all of these former students, which described the programs and asked the addressees to call a telephone number or return an enclosed postcard if they were interested.

Those who responded to the letter were scheduled for personal interviews with one of the five guidance counselors who participated in the project. The counselors explained to the prospects the nature of the two programs and, where there was interest, assigned them to either the academic or skill training program on a random basis. If a prospect had a strong preference for one of the two programs, however, to the point that he would not accept the random assignment, the counselors were instructed to grant the request. This procedure, of course, violated the principle of random assignment, but it was considered necessary to conduct the study. The pretesting results indicate that the assignments yielded comparable groups in the two programs.

In addition to relying on those who voluntarily responded to the letter, other prospects were recruited by personal visits to their homes. Clergymen, the local offices of the Employment Service and the Department of Public Assistance, and 135 area employers were also contacted and requested to refer prospects to the programs. Posters, describing the programs, were displayed at public housing developments and business establishments, and announcements were carried by local newspapers and radio and television stations.

Age was the only basis on which prospects were screened. An applicant who seemed "young" (twenty-one or younger) to the counselors was accepted, but applicants who, in the judgment of the counselors, were too old were rejected.

Even before classes began, it became apparent that the diploma program was the more attractive of the two. When the number who had signed up for this program reached 100, it was decided to assign all future prospects to the skill training program. By the start of classes on October 4, 1965, the numbers enrolled who also attended the first classes were 97 in the diploma program and 61 in the skill training program.

High degrees of attrition were expected in the early weeks of the programs because of the schedule of four hours per night, five days per week. In general, these expectations were confirmed. Some of the original applicants never attended classes; others attended for only a few days. For these reasons, it was decided to continue accepting applicants for the first few weeks of the programs. By the middle of November 1965, 115 students had been enrolled in the diploma program at one time, although many had already left (Table 2).

TABLE 2

Applicants Enrolled for Diploma Program to November 15, 1965, and for Skill Training Program to April 15, 1966, by Sex and Color

	Diploma			Skill-Training			Color Total
	Male	Female	Total	Male	Female	Total	
Color							
White	51	17	68	40	25	65	133
Black	17	30	47	9	54	63	110
Total	68	47	115	49	79	128	
Sex Total				117	126		243

After mid-November, applicants were no longer accepted into the diploma program. The skill training program, however, experienced a more rapid loss of students. While there was little active recruiting after the first few months, applicants were accepted until the middle of April 1966. By that date, 128 students had been in the skill training program at one time or another.

When interviewing for the experimental groups, the counselors had attempted to enroll in the control group those prospects who were not interested in the academic or skill training program. Some were signed up in this way, but an additional effort was subsequently made to obtain the desired number of 100. The remaining names on the original list of dropouts were divided geographically among the five counselors, who then contacted these individuals personally to solicit their participation.

Participation in the control group was offered as an opportunity for broad vocational guidance and counseling. It was explained to the prospects that various aptitude and ability tests would be administered. The results would be interpreted to the individual with regard to their vocational relevance. The counselors said that they would try to help the subjects formulate vocational plans. As an added inducement, subjects in the control group were to be given an opportunity to prepare for and take the General Educational Development test to qualify for a high school diploma awarded by the state. The subjects were also to be paid five dollars for each contact with a counselor.

More than 100 subjects were recruited for the control group by mid-February 1966. Two sessions of pretesting were conducted on February 26. Although the subjects were informed they were to be paid five dollars for each testing session, only fifty appeared for the tests. Subsequent efforts to test the missing subjects were made. Some experimental group subjects, who had been tested and then left the programs during the first three months, were transferred to the control group. When it was decided to terminate further efforts, pretest data were available for ninety-one subjects. The sex and race characteristics of these subjects are shown in Table 3.

TABLE 3

Control Group Subjects for Whom Pretest Data
Were Obtained by Sex and Color

	Male	Female	Total
Color			
White	35	18	53
Black	17	21	38
Total	52	39	91

Another group of subjects was selected from the senior class of one of the participating school districts. These subjects, referred to as "regular high school graduates," were selected to match as closely as possible those who were in the experimental programs in May 1966 on the basis of race, sex, curriculum, and IQ. It was not possible to make a perfect match because there were fewer blacks in the graduating class than there were in the experimental programs. All blacks in the graduating class, regardless of sex, IQ, or curriculum, were therefore included in the sample. Attempts were then made to balance sex and curriculum. Wherever there were choices available, seniors with IQs similar to those of the experimental subjects were chosen.

In all a total of 119 seniors was selected. They were asked to attend a meeting at which each received three questionnaires and a letter which requested their cooperation in a follow-up study of their post-high school experiences. Not all of those solicited returned completed questionnaires. Table 4 lists the characteristics by sex and color both of the seniors who were selected and of those who chose to participate.

TABLE 4

All Selected Senior Class Members and Those Who Agreed to Participate in Follow-Up Study by Sex and Color

	Selected			Participated		
	Male	Female	Total	Male	Female	Total
Color						
White	34	21	75	27	29	56
Black	22	22	44	15	14	29
Total	56	63	119	42	43	85

Contents of the Program

The Diploma Program: The diploma program was designed to give students the equivalent of three years of high school credits. This program received the approval of the state department of education. Credit units were composed of English, 3 units; mathematics, 2 units; science, 2-1/2 units; and social studies 4-1/2 units. In addition to these twelve academic courses, students were offered five enrichment courses. The actual course content for each quarter is listed in Table 5.

Topics taught in many of the courses were coordinated. In the second quarter, for example, English, literature, and reading had a basic core, in the fourth quarter physical science was divided into three areas--chemistry, Earth and its atmosphere, and nuclear warfare--with each taught by a different teacher. Similarly, for Problems of Democracy the reading was organized into domestic problems, international problems, and problems of society; each of these was also taught by a different teacher.

TABLE 5

Course Content by Quarters in High School Diploma Program

First Quarter	Second Quarter
English Biology (Physical Science) World History (Social Studies) Speech (Enrichment)	English-Literature Reading (Enrichment) American History (Social Studies) Basic Mathematics I
Third Quarter	**Fourth Quarter**
English Literature Economics (Social Studies) Arts and Crafts (Enrichment) American Government (1/2 Social Studies) World Geography (1/2 Physical Science)	Problems of Democracy-Reading (Social Studies) Physical Science Basic Mathematics II Music — Choice of Two Typing — (Enrichment) Arts and Crafts

School was held four hours a night, five days a week. Classes started on October 4, 1965, and continued until September 30, 1966; in all, there were 250 class days. The average monthly enrollment and attendance for both the diploma and skill training programs are shown in Table 6.

Skill Training Program: Three skill training courses were offered to the students enrolled in this program: key punch operator, merchandising (sales clerk), and radio and small appliance repairs. Each student was allowed to select the course he preferred. No females chose radio and appliance repairs, and no males chose key punch operator. A few males initially selected merchandising, but they left the program after a short time. The units covered in each of the courses are listed in Table 7.

TABLE 6

Average Monthly Enrollment of Attendance: October 4, 1965 to September 30, 1966

	Diploma Program			Skill Training Program		
	Average enrollment[a]	Average attendance[b]		Average enrollment	Average attendance	
	Number	Number	Percent	Number	Number	Percent
October 1965	99.3	81.9	82.5	70.9	47.6	67.1
November	88.5	72.4	81.8	68.5	37.3	53.2
December	82.7	59.2	71.6	63.5	34.8	52.5
January 1966	74.9	59.1	82.9	56.8	36.7	64.6
February	71.6	56.1	78.4	59.7	39.5	66.7
March	69.0	58.1	81.1	58.6	33.6	57.3
April	67.5	52.5	81.6	54.4	30.0	55.1
May	64.7	54.9	84.9	50.2	25.7	51.2
June	63.3	55.0	86.9	45.2	19.1	41.4
July	60.4	52.5	86.9	43.4	18.8	43.3
August	60.0	52.9	88.2	33.3	23.2	69.7
September	60.0	53.1	88.5	29.1	19.2	66.0

[a] Average enrollment was calculated by summing the enrollment for each class day of the month and dividing by the number of days.

[b] Average attendance was calculated by summing the enrollment for each class day of the month and dividing by the number of days.

TABLE 7

Course Content in Skill Training Program

Data Processing

Unit	Contents
I	Basic Reading Skills
II	Introduction to Data Processing
III	General Operation of the 024 Keypunch
IV	General Operation of the 026 Keypunch
V	General Operation of the 056 Verifier
VI	General Operation of the Sorter 082
VII	Special Features of the 082
VIII	Sufficient Practice to Develop Speed and Accuracy
IX	General Operation of the 548 Interpreter
X	General Operation of the 519 Reproducer
XI	General Operation of the 085 Collator
XII	General Operation of the 402

Merchandising

Unit	Contents
I	Elements of Retailing
II	Organization of a Store
III	Establishing Retail Store
IV	Management and Operation
V	Goodwill
VI	Merchandising
VII	Economics of Business
VIII	Basic Course in Math
IX	Advertising and Retail Advertising
X	Salesmanship
XI	Merchandise Math
XII	Textiles - Non-Textiles
XIII	Color, Line and Design
XIV	Review of Merchandise Math
XV	How to Apply for a Job

Radio and Appliance Repair

Unit	Contents
I	Basic Theory
II	Test Equipment
III	Prints and Diagrams
IV	Tools and Equipment
V	Heating Element Appliances
VI	Food Mixers
VII	Ironers
VIII	Electric Motors
IX	Electric Ranges
X	Laundry Equipment
XI	Electric Dryers
XII	Gas Dryers
XIII	Refrigeration and Air-Conditioners
XIV	Batteries
XV	Vacuum Tubes
XVI	Transistors
XVII	Power Supplies
XVIII	Amplifiers
XIX	Oscillators
XX	Detectors
XXI	T.R.F. Receivers
XXII	Superheterdyne Receivers

Table 8 shows the number of students who completed each of the programs by sex and race, and Table 9 shows these numbers as percentages of the number who enrolled in the program. It is clear from these figures that the diploma program had superior retention power and that in both programs the Negro females showed the most persistence. Although students were accepted into the skill training program up to the middle of April, 1966, of those who completed the program twenty-two were in it for the full year, five entered in January, 1966, one in February, and one in April.

TABLE 8

Students Who Completed Diploma and Skill Training Programs by Sex and Color

	Diploma			Skill Training			Color Total
	Male	Female	Total	Male	Female	Total	
Color							
White	21	10	31	4	3	7	38
Black	5	24	29	2	20	22	51
Sex Total				32	57		89

Data Collection

The tests and questionnaires used were selected to measure attitude and ability variables that the experimental programs attempted to influence. Because most of the attitudinal changes related to self-concept and other personality constructs they were assessed with standardized personality measures. The ability variables that the programs tried to influence were basic communications and computation skills. These were also tested, using standardized measures. The degree to which communications and computation deficiencies hinder performance on traditional IQ tests was assessed by comparing results from a traditional test with those from a nonverbal test.

Pretesting of the experimental subjects was conducted during the fourth week of classes, October 25-29, 1965. The main testing session for the control group took place in February 1966. Because of the limited amount of time, the battery of tests given the control group was shorter than that given the experimental group. Posttesting of the experimental subjects took place on September 27 and 28, 1966, and data were obtained for all eighty-nine of the students who completed the programs. The control group subjects were scheduled for

TABLE 9

Completion Rates for the Diploma and Skill Training Programs by Sex and Color

	Diploma	Skill Training	Total
Color			
White	$\frac{31}{68} = 46\%$	$\frac{7}{65} = 11\%$	$\frac{38}{133} = 29\%$
Black	$\frac{29}{47} = 61\%$	$\frac{22}{63} = 35\%$	$\frac{51}{110} = 46\%$
Sex			
Male	$\frac{26}{68} = 38\%$	$\frac{6}{49} = 12\%$	$\frac{32}{117} = 27\%$
Female	$\frac{34}{47} = 72\%$	$\frac{23}{79} = 29\%$	$\frac{57}{126} = 45\%$
Total	$\frac{60}{115} = 52\%$	$\frac{29}{128} = 23\%$	$\frac{89}{243} = 37\%$

$$\text{Completion Rate} = \frac{\text{Number Completing}}{\text{Number Enrolled}}$$

testing on October 1, 1966, and of the ninety-one for whom pretest scores were available, thirty-seven reported for posttesting. Additional efforts brought the number up to sixty-eight.

The results of the pre- and posttesting are summarized below. Tables which present the actual figures are in Appendix A and the full tables are found in the interim report, The School Environment and Programs for Dropouts. On all of these measures the diploma subjects improved their scores but the skill training and control subjects did not. Analyses of the programs indicated that the reason the skill training students did not improve could be attributed primarily to negative attitudes that the administrator and teachers held toward these students. These attitudes are discussed fully in the interim report and summarized in Chapter 5 of this report.

IQ: The Otis (Gamma form), published by Harcourt, Brace, and World, was used as the standard verbal test of IQ. The pretest mean IQ scores of the experimental and control groups (92 and 93) were well within the normal range of intelligence, although they were lower than the general population average of 100. Each experimental group improved its mean verbal IQ score from pretest to posttest by the same amount (1.9 points). Because of the larger number and lower variance in the diploma group, its change was significant while the change in the skill training group was not.

The Revised Beta Examination, published by Psychological Corporation, was used as the nonverbal IQ measure. The average pretest scores for the experimental and control groups were within two points of the general population average of 100. This indicates that the subjects in this study--most of whom were from low socioeconomic levels--performed below their potential when assessed by an intelligence test with a heavy verbal component. All of the groups increased their mean scores from pretest to posttest, and these differences were found to be statistically significant. This general increase appears to be a function of the testing itself, rather than a true increase in intelligence. It is suspected that a practice effect was at work, since the puzzles and mazes which compose the test may have been easier to solve when presented for the second time. However, in spite of this general increase for all groups, a statistically significant difference among group posttest scores was detected, where none had existed on the pretest. This difference is accounted for by the fact that the diploma group increased more than the other groups. Thus, in terms of nonverbal intelligence changes, the diploma group profited more from the experimental manipulations than did the skill training and control groups.

Measures of Academic Achievement: Three standardized achievement tests were administered. The two experimental groups were tested for reading level, arithmetic computation, and arithmetic concepts; the control group received only the reading and arithmetic computation tests. The Stanford Achievement Tests, Forms W and X standardized for grades seven through nine, published by Harcourt, Brace, and World, were used. Although individual scores varied widely, the group means tended to cluster around the sixth and seventh grade levels of achievement. Reading scores generally were higher than arithmetic scores. On all three achievement pretests, statistical analyses detected no significant differences among the diploma, skill training, and control groups.

All the pretest-to-posttest changes were in favor of the diploma group. Its largest advances were on the arithmetic scales, but even the smaller increase on the reading test was large enough to be significant. The skill training and control groups did not improve their performances significantly on any of the achievement tests. Comparisons across groups on the posttests, showed that the diploma group at significantly higher grade-achievement levels than the skill training and control groups.

Attitudes Toward Self: Measures of self-evaluation were obtained from all of the subjects, including the regular high school graduates. The instruments used were the Adjective Check List (Consulting Psychologist Press) and Coopersmith's (1967) Self-Esteem Inventory. The Adjective Check List yields several scores; the two used in this analysis were favorability and unfavorability toward self.

On the favorability scale, no real differences were found among the four groups on the basis of the pretest scores. All of the groups appeared to be at about the same level of favorability toward self, and, contrary to expectations, the dropout groups were not significantly lower than the regular high school graduates. On the unfavorability scale, a significant difference among the groups was found. This difference is accounted for by the regular high school graduates, who, as would be expected, were lower in unfavorability when compared with any of the dropout groups. Among the dropout groups, themselves, no real differences were apparent. A significant difference was also found on the Self-Esteem Inventory pretest, where the skill training group had a high self-esteem score and the regular high school graduates were on a lower level together with the diploma and dropout control groups.

On the Adjective Check List posttests, the diploma group significantly increased its favorability score, and decreased its unfavorability score, from its pretest levels. Although these changes were statistically significant for the diploma group they were not large enough to cause this group to be significantly different from the skill training and control subjects. The regular high school graduates were not included in these comparisons for they completed the Adjective Check List only once during the experimental phase of the study.

An interesting reversal showed up in the posttest scores on the Self-Esteem Inventory. The skill training group, which had the highest pretest self-esteem, underwent a large drop in its mean score. At the same time the diploma group increased its mean score by a rather large, but statistically nonsignificant, amount. Thus, on the pretests, the skill training group had the highest level of self-esteem, while on the posttests the diploma group ranked highest.

Because the results on attitudes toward self are inconsistent, it is difficult to interpret them. Both of the tests used should be measuring approximately the same thing, but, from the obtained results, this does not appear to have been the case. One thing is consistent--on both tests the attitudes toward self of the subjects in the diploma group appeared to improve. As for the relative placement of the groups along a continuum of scores, however, especially on the pretest, the results of the two tests do not agree. In addition, the scores of these tests did not intercorrelate well either on the pretest or posttest. On the pretest, for example, the favorability scale of the Adjective Check List correlated .16 with the Self-Esteem Inventory and the unfavorability scale correlated -.05. Neither of these correlations indicates the scales were measuring the same variables.

Despite this lack of agreement, between them the measures do seem to reflect the type of changes that appeared to take place in the separate programs. The much higher attrition rate in the skill training program, its frequent change of teachers, and its generally non-supportive atmosphere could be factors leading to a large drop in the students' self-esteem. In addition, the results of the student interviews (reviewed in the next section) indicate the skill students were less favorable than the diploma students in attitudes toward self.

Interviewing of Students: The interviews conducted during the experimental phase of the study were designed to obtain the students' evaluations of the effectiveness of the programs. They were conducted both with students who completed the programs and with those who did not. The latter were interviewed primarily to determine the factors which influenced their decisions to drop out of the experimental programs. The interview schedule attempted to stimulate the respondent to talk about the program--either diploma or skill training--and about himself. Table 10 lists the number of interviews conducted among the subjects who completed the diploma and skill training programs and among those who withdrew from the programs. The interviews were conducted by guidance counselors who had had no previous connection with the project.

The interview results confirm the test results, and the impressions of the personnel associated with the project, and indicate that the diploma program was seen by its subjects as more supportive and accepting. Analysis of the self-concept questions suggests that the diploma program increased the self-confidence of those who completed it.

One of the questions that documented the concern for the students evident in the diploma program was: "Were there any things, in particular, that you liked about the Penn State program?" References to the administration, the general atmosphere, and teachers were made by almost half of the diploma graduates but only four percent of the skill training graduates. In addition, those in the diploma program were much more likely than the skill training students

TABLE 10

Number of Interviews Conducted Among Students Who Were Enrolled for the Experimental Programs

	Interviews	Total in Group	Percent of Total Interviewed
	N	N	%
Completed Program			
Diploma	39	60	65
Skill Training	23	29	79
Withdrew			
Diploma	27	55	49
Skill Training	34	99	34
Total	123	243	50

to discuss a problem with a teacher or counselor, even after they left the program. The diploma subjects also exceeded the skill training subjects in the proportion who were sure their program participation would be helpful (69 percent diploma, 32 percent skill training), who were motivated by the goal to overcome the "chore" of going to school every night (30 percent diploma, 0 percent skill training) and who thought the length of the program was the right length or not long enough (81 percent diploma, 50 percent skill training). Among the program dropouts, 44 percent of the skill training students said they left the program because it was not worthwhile or run correctly. None of the dropouts from the diploma program gave these reasons.

The analysis of the goals and values of the students, and expectations of realizing them, revealed a consistent pattern. Although they all had much the same goals in life, the graduates of the diploma program differed from the others in a belief in their personal ability to achieve their goals. The chief values of all the subjects were material possessions and affiliative virtues. Success consisted of having a good paying job, a car, and a home. But affiliation virtues, such as being a good spouse or parent and being able to get along with people, were considered the most important things in life. When the subjects were asked what they personally wanted from life, however, achievement goals were mentioned more frequently than affiliative. In comparison to the other subjects the graduates of the diploma program were more confident that they would obtain higher level jobs, more optimistic about the value of long range planning, more likely to enroll in additional educational or training programs, and more certain they would complete the programs if they did enroll.

These results suggest that the diploma program produced some positive changes in the self-concepts of those subjects who completed it--changes involving attitudes toward their ability to influence the future events in their lives.

POST-PROGRAM FOLLOW-UP

After the end of the experimental programs in October 1966 contact was maintained with all the subjects for a period of thirty-three months until June 1969. Two waves of follow-up interviews were conducted. One was concentrated in the last quarter of 1967 and the second in May and June of 1969. The 1967 interviews were, on the average, 14 to 15 months after the end of the programs and the 1969 interviews were 15 to 16 months after the first interviews. All were conducted at the convenience of the subjects, usually at their homes, and focused on employment and personal experiences during the follow-up period to determine if participation in the diploma and skill training programs had influenced them. A copy of the interview schedule is included in Appendix D.

In the entire course of the project 453 subjects were involved to some degree at some time. Table 11 shows the classification of these subjects at the end of the experimental phase of the project and the number interviewed during the first and second follow-ups. The percentages shown are based on the total of all subjects and are, therefore, conservative. Many subjects had very fleeting contact with the project: some enrolled and never attended and others attended for only a few days. There were, for example, 38 program dropouts for whom no records were available. Further, of 119 regular high school graduates who were requested to participate in the study, only 85 volunteered to do so. It was these subjects with the least participation who proved the most difficult to interview. If they were to be deleted from the table, the percentage of original subjects interviewed would be in the seventies.

The reasons why interviews were not completed are shown in Table 12. The biggest problem was the inability to locate respondents. The population was highly mobile and usually did not leave forwarding addresses. The subjects were offered an incentive of one dollar to report each change but this, apparently, was not sufficient incentive for many of the subjects. The percentage for whom no initial addresses were available reflects subjects with whom contact was lost before interviewing began--letters, as well as birthday and Christmas cards, were returned as undeliverable. The subjects under "could not locate" are those the interviewers tried to, but could not, find. The "reason not indicated" category includes the interview assignments which were not returned or returned without the reason for non-completion indicated. It seems likely that the main reason these were not returned was because the subjects could not be located. In all, lack of forwarding addresses was responsible for over half the subjects not interviewed.

TABLE 11

Completed Interviews by Groups of Subjects
First and Second Follow-Up

Group	Experimental Phase	1st Follow-Up 1967		2nd Follow-Up 1969	
	N	N	%	N	%
Diploma completers	60	51	85	46	77
Skill training completers	29	25	86	25	86
Diploma dropouts[a]	55	23	42	16	29
Skill training[a] dropouts	99	57	58	49	49
Control group	91	66	73	62	68
High school graduates General	87	47	54	50	57
High school graduates Vocational	32	23	72	18	56
Total	453	292	64	266	59

[a] Many enrolled for the programs but failed to attend classes. Records were unavailable for 19 subjects from the diploma program and 19 from the skill training program.

TABLE 12

Reasons Interviews Not Obtained

Reasons	1967 %	1969 %
Could not locate subject	16	23
Military service	13	21
Refusal	11	4
Could not schedule	4	6
Reason not indicated	26	19
No initial address for subject	30	28
Number	161	187

To try to locate these subjects every source which was considered likely to have new addresses--post office, welfare department, previous landlords, employers--was contacted. In addition several attempts were made to pursuade reluctant respondents, including the offer of a ten dollar incentive payment. The Retail Credit Company services were also employed after the first follow-up to track down some of the respondents. The subjects in Table 12 represent those who could not be contacted or induced to cooperation by any methods available to the investigators.

Table 13 presents the percentages of males and whites who were and were not interviewed during each follow-up. Males were more difficult to interview. The racial composition of the interviewed and non-interviewed samples was rather similar with the exception of the dropouts from the skill programs. Whites were overrepresented in this group in the non-interviewed sample. The other characteristic on which the interviewed and non-interviewed subjects could be compared was IQ. The mean IQ of the non-interviewed subjects was 93.7 which was very close to the mean of 94.3 for those interviewed.

Among the interviewed subjects, the skill group was composed of more blacks and females than the other groups. As will be seen in Chapter 3, this influenced their chances for employment and the job experiences of those who were employed. The regular high school graduates from the general curriculum tended to be composed of more white females, while the dropouts from the diploma program tend to be

TABLE 13

Sex and Color of Subjects Interviewed and
Not Interviewed in 1967 and 1969 Follow-ups

Interviewed	Diploma Completers		Skill Completers		Control		Diploma Dropouts		Skill Dropouts		High School General		High School Vocational	
	1967	1969	1967	1969	1967	1969	1967	1969	1967	1969	1967	1969	1967	1969
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Male	35	35	20	20	56	56	61	69	39	33	30	32	52	50
White	56	55	24	20	60	58	69	70	47	44	72	70	56	56
Number	51	46	25	25	66	62	23	16	57	49	47	50	23	13
Not Interviewed														
Male	89	69	25	25	68	60	62	63	52	64	51	51	100	86
White	56	46	50	25	56	55	69	68	70	72	67	66	33	42
Number[a]	9	13	4	4	25	29	13	19	23	25	39	35	9	14

[a] Information on sex and race was not available for some subjects hence the number missing plus the number interviewed do not always equal the original group.

composed of more white males. The other four groups had approximately equal distributions of color and sex.

Marital status of the subjects varied among groups. Three-fourths of the dropouts from the diploma group were married, and the necessity for many of them to hold regular jobs caused them to leave the program. As would be expected, the regular high school graduates had the smallest proportion married, about one-third by 1969. During the 1967 interview, about a quarter to over half in the remaining four groups reported that they were married, and by 1969 approximately half of all the subjects were married.

The data on number of children follow the same pattern--dropouts from the diploma program had the largest proportion with children and the regular high school graduates had the fewest. By 1969, about 80 percent of the diploma dropouts had children compared to to about 20 percent of the regular graduates. Among the other groups, about two-thirds had children.

SUMMARY

These then are the subjects who provided the information that is reported in the following chapters. In summary it can be said that most of them came from poverty or lower working class backgrounds. Within this range the students who took the skill training program came from the poorest circumstances and the regular high school graduates from the best. During the experimental phase of the study, the diploma program was far more successful. Its students improved their academic skills and demonstrated hightened self-esteem and confidence in their ability to control the events in their lives.

During the followup, it was possible to locate and interview only about 60 percent of the subjects who had participated during the experimental phase. The subjects who were hardest to locate were those who had withdrawn from the experimental programs, and males were harder to find than females. The different rates of attrition during the programs and the inability to find about forty percent of the subjects resulted in follow-up groups unequal in sex and color distributions. These characteristics affected the employment experiences so caution must be exercised in interpreting the results by groups reported in Chapters 3 and 4.

CHAPTER 3

EMPLOYMENT EXPERIENCES AFTER THE PROGRAMS

Experience in the labor market is the crucial test for any program designed to enhance the employability of its participants. By these standards neither the experimental programs nor the regular high school curricula had any significant effects on the subsequent employment experiences of their students in the thirty-three month period covered by this follow-up. There is little evidence that the subjects who completed the experimental programs or who graduated from the regular high school had greater job stability, earned more money, or were more satisfied with their jobs than the dropouts who received no training or those who withdrew from the experimental programs. In fact, some of the information presented in this chapter, especially the earnings data, indicates that the longer labor market participation of the control subjects and program dropouts were more beneficial to them than the educational programs were to the subjects who completed them.

It is important to note that all of the employment experiences reported in this chapter took place during a period when the labor market in the area where the study was conducted had high levels of employment. The economy in this area is heavily dependent on metal industries, both primary and fabricating. Approximately 60 percent of the total employment in the area is accounted for by these industries. The demand for metal products caused by the Vietnam War produced a high level of demand for workers. The subjects who took part in the study thus sought work in a favorable labor market. It might be argued that these conditions could have obscured any effects that the educational and training programs might have had for virtually everyone who sought work should have been able to find it. The employment figures presented in this chapter, however, indicate that this was not the case. Substantial proportions of all groups, from 17 to 39 percent who reported they were seeking jobs, were unemployed when interviewed. Since unemployment was more prevalent among females, the heavy industry dominance of the local economy may have been partly responsible. Nevertheless, unemployment rates as high as these, in the midst of a favorable labor market, raise serious questions concerning how much a training program can do to remove barriers to employment for young people from poverty backgrounds. Acquiring diplomas or skill training, did not appear to open many doors that had previously been closed. The nature of these additional barriers are discussed at length in Chapter 5.

Contents of the Chapter: As was described in the previous chapter, the subjects were interviewed during two follow-up periods. The first, referred to as the 1967 follow-up, actually began in October of 1967 and was completed during the first quarter of 1968. A little over a year later, in May 1969, the second follow-up was begun; it was completed in August 1969. The average interval between interviews was about sixteen months. Not all of the subjects were interviewed during both periods. Consequently, when the data are presented, the number of subjects differs between years. To assure valid comparisons over time, a collated set of data was generated based only on subjects who were interviewed during both follow-up periods. Throughout this chapter the data presented usually refer to all of the subjects interviewed. However, when inferences are made about changes over time, the conclusions were carefully checked against the collated set of data.

Most of the analyses in this chapter present data on jobs held at three different times: the first jobs the subjects held after they left the experimental programs or high school and the jobs they held at the time of the two follow-up interviews. The information on the first jobs held was gathered during the first follow-up interview together with information on all other jobs held to the time of the interview. Data on first jobs are emphasized for they tend to yield the clearest indication of the effects of the various educational programs on the employability of the subjects. For jobs held later it is difficult to assess the effects of the preparation received as separate from subsequent experiences in the labor market. The most recent jobs at the time of the 1967 and 1969 interviews are also emphasized for they yield the most precise descriptions of the subjects at particular points in time. The respondents' answers refer to jobs they were actually holding (or, if unemployed, to jobs most recently held) and thus are least susceptible to forgotten data or distorted recollections. Because all of these analyses refer to employment experiences, subjects who held no jobs at all during the follow-up period are excluded.

The definition of "first job" differs somewhat among the various groups. For those who completed the experimental programs and for the regular high school graduates, first jobs were obviously the first ones held after their education ended. For the regular high school graduates that was June 1966 and for the program completers it was October 1966. To make the period of labor market experience comparable for the control subjects their first jobs were also defined as those they held in October 1966 or later. Many of the control subjects had held these same jobs before that date. Time spent in them prior to the end of the experimental programs, however, was separated from the time after the program and only the period after the program is reflected in the indices of employment experience. Subjects who dropped out of the experimental programs were considered to have entered the labor market at the time of their withdrawal and hence their exposure is somewhat longer than that of the other subjects.

Since the experimental programs were conducted in the evenings, it was possible for students to hold regular day-time jobs and still attend classes. This, however, required considerable energy and self-discipline. The main reason students left the diploma program (stated by 35 percent) was because their jobs made it difficult to attend. Thus, while it was theoretically possible for the experimental subjects to attend the programs and hold regular jobs, it was actually quite difficult to do so and attendance in the programs largely removed them from the labor market. The difficulties of holding a regular job during the experimental programs indicate that among the costs to the subjects attending the experimental programs were the foregone earnings and job experiences they could have obtained in regular jobs.

The discussion of the job experiences of the subjects is divided into two general areas. The first, titled "The Job Hunt" concerns the job preferences of the subjects, the wages they desired, the methods they used to find out if jobs were available, the hiring criteria of employers, and the perceived relationship between the subjects' education and the jobs which they actually found. The second section, "Indices of Employment Experiences," covers job tenure, wage rates, socioeconomic status, job satisfaction, and supervisor ratings. For all of these areas the discussion focuses on the first jobs after the program and on the most recently held jobs at the time of the two follow-up interviews.

When the subjects were divided into groups, the usable number of subjects in some groups became quite small. Employment data, for example, were available for only seventeen subjects in the skill training group. The number of subjects in the groups ranges from this low of seventeen to a maximum of seventy-two in the regular high school graduate group. Thus, one must be cautious when examining the data and be aware of the small numbers on which the percentages are often based. The small numbers also precluded any additional analyses, such as by sex or race, since this would have involved further sub-dividing of the groups.

To overcome these problems of small numbers and also to reflect total labor market experiences, multiple regression analyses were conducted using special employment indices. These indices were constructed so they included all jobs held by the subjects. They were analyzed by multiple correlation techniques that estimated the independent effects of sex, race, program, number of jobs held, and employment experiences during the program on the dependent variables indices of employment after the program. These analyses, presented in the section "Multiple Regression Analysis of Employment Indices," confirm those presented in the previous section in that there are few consistent effects associated with completing the experimental programs or graduating from high school.

Employment Status of the Subjects

Before discussing the employment experiences of the subjects who found jobs, it is appropriate to present an overview of the employment status of all of the subjects. If the effectiveness of a training program is to be judged by the employment experiences of its students, the single most important item of information about the students is their employment status. Are the program's former students in or out of the labor market, and, if they are in the market, are they employed or unemployed? The figures in Table 14 present rather discouraging answers to these questions. The most discouraging figures are those for the employment rates, which indicate that between 17 and 39 percent of the subjects who claimed they wanted jobs were unable to find them.

Although high rates of unemployment are common among the young, comparable nationwide rates are found only among dropouts sixteen and seventeen years of age (Perrella, 1969; Hayghe, 1971, 1972). The older age of these subjects, who were between nineteen and twenty-three years old when interviewed, would lead one to expect higher rates of employment. These unemployment rates, it should be noted, are based only on those subjects who were active participants in the labor force. Participation rates are shown in the first row of Table 14. Most subjects not in the labor force were kept out by housekeeping or child care responsibilities; others were attending additional educational or skill training programs. The percentage in such programs was much higher in the 1967 follow-up (10 percent) than in 1969 (2 percent). As would be expected, the ones who took these programs were mainly the regular high school graduates from the general curriculum. Not so expectedly, subjects who dropped out of the skill training program had the second largest proportion who took additional educational or training courses. Almost all of the programs were occupationally oriented.

Housewives represented the bulk of the subjects who reported they were never employed in the periods preceding the interviews. The sex and child care responsibilities of the subjects in the various groups seemed more important in determining whether or not they found employment than the particular education or training they were exposed to.

Although the differences in employment rates and labor force participation among the groups are not significant, it is clear from the figures in Table 14 that when the regular high school graduates were in the labor market they had more stable employment than the other subjects. They had the lowest proportion never employed and the highest proportion with continuous employment. The graduates of the skill training program present the most mixed picture. Their employment rate is the best of any group, even slightly better than the regular high school graduates, but their labor force participation rate was low for both periods, and for the 1969 follow-up they

TABLE 14

Labor Force Status at Time of 1967 and 1969 Interviews and for Periods Preceding

	Diploma Completers		Skill Completers		Controls		Program Dropouts[c]		High School Graduates[d]	
	1967	1969	1967	1969	1967	1969	1967	1969	1967	1969
At Time of Interview	%	%	%	%	%	%	%	%	%	%
Labor force participation rate	84	64	72	70	80	79	71	68	76	85
Base number[a]	(50)	(44)	(25)	(24)	(66)	(56)	(76)	(54)	(70)	(68)
Employment rate	69	64	83	82	68	77	61	65	81	81
Base number[b]	(42)	(28)	(18)	(17)	(53)	(44)	(54)	(37)	(53)	(58)
Period preceding interview:										
Subjects always employed	29	35	24	36	38	47	30	28	44	53
Subjects never employed	22	17	20	32	15	21	31	40	10	6
Number	(51)	(46)	(25)	(25)	(66)	(62)	(80)	(65)	(70)	(68)

[a] Base is number of subject minus no answers.

[b] Base is number of subjects employed, laid off, or actively looking for work.

[c] Results for the dropouts from the diploma and skill programs did not differ significantly.

[d] Results for the graduates from the general and vocational curricula did not differ significantly.

had one of the largest proportion of subjects who had never been employed. These contradictory findings are partially explained by the high proportion of unwed mothers in this group. Some of these young women lived with their parents and cared for younger brothers or sisters as well as their own children while their mothers worked. Others maintained their own households. Young women with family responsibilities were also common among the dropouts from the experimental programs and tended to lower labor force participation among these subjects.

The majority of subjects, who were unemployed when interviewed, were not seeking any particular type of job. They just wanted work. The information sources they were using to seek employment differed in one important way from those used by the subjects who were employed--there was less reliance on the referrals of family and friends. The state employment office was used about twice as often as any other source. This increased reliance on formal sources and the decreased use of the informal sources through which most people find employment reflect the limited opportunities available in the immediate environment of these subjects.

The subjects, who had been employed at least once during the periods preceding the follow-up interviews, had held an average of 2.0 jobs between the end of the programs and the 1967 interviews and an average of 1.8 jobs between the 1967 and 1969 interviews. There were no statistically significant differences among the groups in the number of jobs they had held. Nor were there any significant differences in the number of times the subjects were unemployed, about 1.0 time for both follow-up periods. The average employed subject thus experienced one job change--that is, he held two jobs and was unemployed once--in the period before each of the interviews. The jobs held during these periods provided the data that are examined in the remainder of this chapter.

THE JOB HUNT

This section examines the subjects' expectations and experiences while seeking work. These areas are the goals during the job hunt, the methods used to seek jobs, hiring criteria used by employers, and the relationship between education and employment.

Goals

Minimum Wage: When the subjects were asked if, in seeking their first jobs, they had in mind the minimum wage they would accept, about half said they did. The averages for minimum acceptable wages were nearly identical across four of the groups ($1.66 to $1.67); the mean wage for the skill training group was slightly lower ($1.45).

Due to the small sample sizes and large spread in the distributions, this was an insignificant discrepancy. It appears that having obtained a diploma, either through the high school or the Penn State program, did not significantly change one's expectations of a minimum acceptable wage for his first job.

From their first job after the program ended until their most recent job of 1967 the minimum wage sought by the subjects dropped on the average about 10 cents among the diploma graduates and the control group. Conversely it increased 15 cents to $1.60 among the completers of the skill training program. In the period between the 1967 and 1969 interviews minimum wage expectations took a big jump for all groups except skill training. The 1969 mean minimum varied from $1.84 among the diploma graduates to $2.17 among the control subjects. The skill training group once again was the exception and increased to only $1.68. The data for the collated subjects (those interviewed at both follow-ups) were quite similar in all respects to those of the total groups.

These means are based on, at most, two-thirds of the employed subjects in the groups; the remainder did not report minimum expectations. There was considerable variation among those who reported them, especially at the upper end of the distribution, where a few had expectations of $2.50 or more. This variation, together with the reduced number of respondents, caused the differences among groups to lack statistical significance. Nevertheless, the differences did tend to reflect the actual mean earnings of the various groups which are presented in the next section.

Effects of Education on Job Selectivity: When asked if, after they left the programs, they looked for any particular types of jobs, the subjects who completed the skill training program reported more selectivity than any of the others. About half (47 percent) stated specific preferences which usually involved the skills they had studied. Another 18 percent cited general goals, yielding a total of about two-thirds of the group with some vocational preferences. In the other groups proportions were reversed, one-third or fewer with preferences. Even among the regular high school graduates there was no significant difference between the students who had been in the general curriculum and those who had been in the vocational curriculum.

The proportions in the various groups who reported that their educational or guidance experiences had influenced their job preferences varied widely. Three-fourths of the skill completers said their program influenced them, and about two-thirds of the diploma completers and one-half of the regular vocational graduates also reported such influence. Only one-fourth of the regular high school graduates from the general curriculum and the program dropouts indicated any effect. The control group which received a minimum vocational guidance program--designed mainly to maintain their interest in the study--had the lowest proportion that was influenced

(16 percent). It is possible, of course, that vocational preferences could have been influenced, but for a variety of reasons the subjects did not seek the kinds of jobs they really preferred. Or the influence, especially in the diploma program, may have been quite general. Whatever the explanation, it appears that the skill training program had the most effect on the kinds of jobs the subjects sought after their programs. Unfortunately, fewer than half of the skill training subjects were able to find jobs where they used the skills they had studied. (The data on the relationship between education and employment are discussed at greater length in the next section.)

Over the thirty-three month follow-up period some subjects in the other groups became more selective in the kinds of jobs they sought. The skill subjects still had as high a proportion seeking particular jobs as any other group (62 percent), but they were matched by the regular high school vocational graduates. The lowest percentage with identifiable goals was in the control group (30 percent). It may be that increasing maturity and job experiences contributed to the development of preferences in some of the subjects, while disappointments in attempts to find the kinds of jobs they wanted may have prevented further crystallization of goals among the skill subjects.

Methods Used to Seek Jobs

Personal contacts and informal referrals were used by most subjects as they sought jobs. Table 15 shows the sources that the subjects reported using at least once as they looked for their first jobs after the completion of the programs and for their most recently held jobs in 1967 and 1969. The patterns across groups and within groups across jobs are generally quite similar. Subjects in all of the groups were likely to investigate job possibilities mentioned by family and friends, and to apply on their own to the hiring offices of private companies. The experimental subjects, both those who completed the programs and the dropouts, also made frequent use of the state employment service offices.

Although a few of the subjects who completed the experimental programs reported they found their jobs through the program, they were really referring to personal contacts with teachers or guidance counselors that led to jobs. In order to assure comparability with the other subjects, the programs did not attempt to locate jobs for their students. Such placement efforts would have given the program completers an employment advantage not shared by the other subjects and thus would have obscurred the effects of the education and training programs, themselves, on employment.

The totals in Table 15 exceed 100 percent in almost all cases indicating that some subjects used more than one source. These totals do not, however, reflect an active job search. If each subject had used only two sources the total would be 200 percent. Over half

TABLE 15

Sources Used at Least Once in Seeking First Jobs After Programs and Most Recent Jobs, 1967 and 1969

Source	Diploma Completers First Job	Diploma Completers 1967	Diploma Completers 1969	Skill Completers First Job	Skill Completers 1967	Skill Completers 1969	Controls First Job	Controls 1967	Controls 1969	Program Drop Outs[a] First Job	Program Drop Outs[a] 1967	Program Drop Outs[a] 1969	High School Graduates[b] First Job	High School Graduates[b] 1967	High School Graduates[b] 1969
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Family and friends	35	37	34	24	47	44	35	43	24	41	46[a]	44	41	50	25
Hiring office of private company	15	17	45	29	21	25	10	13	16	21	18	28	40	35	41
State employment office	35	27	34	35	26	25	5	11	12	25	28	10	20	16	23
Advertisement	5	5	10	6	16	19	13	9	16	18	23[a]	13	15	13	23
Contacted by employer	2	20	3	6	26	25	18	15	12	3	2	8	10	10	17
Private employment agency	--	--	10	6	16	12	--	--	12	5	4	8	6	6	14
Union	2	--	5	--	5	--	2	2	2	2	3	--	--	--	2
PSU program	5	5	3	6	5	--	2	--	--	--	--	--	--	--	--
Other	28	12	10	29	5	19	14	9	18	8	9	8	6	12	9
Total	127	123	154	146	167	169	99	102	112	123	133	119	138	142	154
Number	40	41	38	40	19	16	62	55	49	61	47	39	73	62	64

[a] Results for the dropouts from the diploma and skill programs did not differ significantly.

[b] Results for the graduates from the general and vocational curricula did not differ significantly.

of the subjects (56 percent) found employment within a week of starting to seek it and over 80 percent were employed within a month. (It should be recalled that only subjects who held at least one job are being discussed.) About 10 percent were unemployed for twelve weeks or longer. Even if this 10 percent had used several sources their activity would have inflated the totals. Since the totals are relatively low, it appears that all subjects relied on a limited number of sources, primarily personal contacts. And since most of the subjects were from poverty level or low income families, the opportunities available through the personal contacts in their environment must also have been limited.

The sources through which the subjects ultimately obtained their jobs were similar to the sources through which they sought them. For the first jobs after the program the referrals of friends and family were the most effective sources, but by the time of the 1969 follow-up personal application to companies had become almost as effective. This may reflect an increase in employability due to older age and previous job experience. Although the state employment offices placed many subjects (about 10 to 20 percent across groups) they were least effective in proportion to the number of subjects who reported seeking jobs through them. Among the diploma subjects, for example, 35 percent said they sought jobs at state employment offices, but only 18 percent said that it was through these offices that they found their jobs.

Geographic Mobility: In seeking their first jobs after the programs or high school the subjects demonstrated little geographic mobility. Almost all found jobs which were either in their home town or in their home county; only 8 percent found employment outside this area. This lack of mobility was also evident for the more recent jobs held. In 1967 only 6 percent and in 1969 only 9 percent of the subjects found work outside their home county. It seems likely that the sources used in seeking jobs limited geographic mobility. This would be especially true for family and friends, local agencies, and the other similar sources. The subjects may also have been reluctant or may have lacked the resources to leave their home locality. The lack of information on opportunities in other areas coupled with limited means to finance a move, plus a strong demand for workers in the local market, all served to limit mobility.

There is reason to expect that, if the trainees had been more mobile, they might have had more success in finding and keeping employment. A study involving Job Corps trainees indicates that those who were relocated as part of training were four times as likely to be employed as those who were trained in their own communities and returned daily to their homes, neighborhoods, and outside friends. (Smith, 1967)

There is, of course, a serious shortcoming in these mobility data: they are based on the subjects who were available for interviews. It is highly likely that at least some of the subjects who could not be located had moved from the area to obtain employment. Because these subjects are not represented, the figures presented above probably underestimate the degree of geographic mobility in the sample.

Hiring Criteria

One of the most important questions in the follow-up interviews concerned the hiring criteria used by employers in screening applicants. If, as the credentialism hypothesis states, the lack of a high school diploma is a barrier to obtaining many jobs, it seemed likely that the subjects who earned diplomas through either the experimental diploma program or the regular high school would be more apt to report that their employers used this criterion. The other subjects did not possess diplomas, but those who completed the skill training program had received specialized training and the control subjects had more employment experience than the other subjects. Table 16 shows the percentage who recalled that their employers had asked them about these three characteristics. These possible hiring criteria were contained in a checklist with other items such as "give you an interview" and "ask names of former employers." All these other screening procedures are included in the "other" category of Table 16. It is clear that the subjects with diplomas reported they were asked about them more than the other subjects. But it is equally clear that many of the other subjects without diplomas also obtained jobs where a diploma was reported as one of the screening criteria. There is enough difference between the diploma holders and the others in the percentages that reported they were asked about previous experience to suggest that experience might have tended to offset the lack of a diploma. Questions about training were recalled by very few subjects.

There are obviously many possible explanations for the higher recall of questions about diplomas among the subjects who possessed them--selective memory, for example. Those who held diplomas should be more inclined to recall questions about them than would subjects without them. Nevertheless, it seems safe to assume that the subjects with diplomas were really more likely to be hired for jobs where the employers required a diploma. It also seems reasonable to expect that if a diploma is a requirement, it should somehow be related to the quality of the job. That is, jobs that require diplomas should be "better." The indices of employment in these jobs, however, which are presented in the following section, do not indicate that the subjects who obtained them enjoyed any advantages in terms of income, job satisfaction, employment stability, or the socioeconomic status. Lacking a diploma may well be a barrier to certain jobs, but in the thirty-three months covered by this follow-up, overcoming this barrier yielded few identifiable rewards to the subjects who were able to do so.

TABLE 16

Criteria Used to Screen Applicants for First Jobs Following Programs and for Most Recent Jobs, 1967 and 1969

Employer screening questions	Diploma Completers First Job			Skill Completers First Job			Controls First Job			Program Drop Outs[a] First Job			High School Graduates[b] First Job		
	First Job	1967	1969	First Job	1967	1969	First Job	1967	1969	First Job	1967	1969	First Job	1967	1969
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Diploma	12	10	18	--	--	12	6	5	14	8	5	13	14	13	8
Experience and diploma	15	15	16	12	5	6	18	15	16	10	16	13	19	21	8
Diploma and training	2	2	5	--	--	12	2	4	2	2	5	5	8	10	11
Experience, diploma and training	35	34	26	18	32	38	10	14	16	20	23	13	22	27	31
Diploma total	(64)	(61)	(65)	(30)	(37)	(68)	(36)	(38)	(48)	(40)	(49)	(44)	(63)	(71)	(58)
Experience	5	10	8	18	16	6	16	15	14	18	14	15	3	6	3
Training	--	--	3	--	--	--	--	2	2	2	2	--	--	2	3
Experience and training	--	2	5	12	11	6	3	2	4	3	2	2	--	2	6
Other	28	27	18	29	26	19	40	38	31	34	26	36	23	15	25
No answer or do not know	2	--	--	12	11	--	5	5	--	3	7	2	11	5	5
Number	40	41	38	17	19	16	62	55	49	61	47	39	73	62	64

[a] Results for the dropouts from the diploma and skill programs did not differ significantly

[b] Results for the graduates from the general and vocational curricula did not differ significantly.

In addition to the subjects' reports, information on hiring criteria was also obtained from their direct supervisors. During the 1967 and 1969 follow-up interviews the subjects were asked to name the supervisors of their current or most recent jobs. These individuals named were then contacted and asked to fill out a questionnaire concerning the subjects' jobs and their performance on them. Unfortunately, the number of usable questionnaires which were completed and returned was rather small (45 percent of the employed subjects in 1967, and 42 percent in 1969). As a result the sample sizes by groups are quite low, and the discussion of the results for the supervisor questionnaires must be of a general nature.

The supervisors were asked, "Is a high school education necessary for the performance of this job?" and "Do you require a high school diploma of all applicants for this job?" The answers to these questions are presented in Table 17 together with the answers to other questions about training required for the job and suggestions for "a training program for young people like this employee." The only items which yielded consistent differences among the groups were the questions on the necessity of a high school education and whether a diploma was required of all applicants for the job. About two-thirds of the supervisors of the regular high school graduates reported that such an education was necessary and a diploma was required; among the other subjects only about one-third of their supervisors reported these prerequisites. The supervisors' answers thus agree closely with those obtained from the regular high school graduates as to the necessity for a diploma, but there is a considerable discrepancy between the supervisors and the subjects who obtained their diplomas through the experimental program.

There is no reason to think that the supervisors perceived the diploma obtained by the former dropouts as inferior to that of the regular graduates. It was the same diploma awarded by the same school system, and there was no indication that it was obtained through a special program. The subjects who completed this program tended to see themselves as obtaining jobs that required a diploma, but their perceptions were not confirmed by their supervisors.

On the other questions the majority of the supervisors reported that some special training was necessary for the performance of the subjects' jobs, and that the most frequent recommendation for a training program for young people, like these subjects was the teaching of specific occupational skills. The development of personal traits, habits, or attitudes was the next most frequently cited objective. Most supervisors appear to believe that the subjects, and other young people like them, needed training that would teach them specific job skills or improve their personal qualities more than they needed a better general education.

TABLE 17

Supervisors' Perceptions of Educational Requirements and Training Needs of Subjects on Most Recent Jobs, 1967 and 1969

Supervisor Responses	Diploma Completers		Skill Completers		Controls		Program Drop Outs[a]		High School Graduates[b]	
	1967	1969	1967	1969	1967	1969	1967	1969	1967	1969
	%	%	%	%	%	%	%	%	%	%
High school education necessary	32	29	33	40	16	22	18	33	69	69
High school diploma required	26	41	25	30	19	19	18	36	69	66
Special training necessary	39	71	58	30	38	67	61	72	68	73
Training provided by company	100	92	60	29	70	45	82	100	70	60
Suggested Training Goals										
General	18	10	11	--	18	--	25	--	33	5
Specific skills	45	30	56	14	64	55	75	56	33	73
Personal improvement	36	60	33	86	18	36	--	44	34	21
Number[c]	9-19	10-17	5-12	7-10	10-26	9-18	8-18	9-15	12-26	19-20

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[a] Results for the dropouts from the diploma and skill programs did not differ significantly.

[b] Results for the graduates from the general and vocational curricula did not differ significantly.

[c] The numbers vary because not all the questions were answered by all supervisors.

Relationship between Education and Employment

When students who have taken quite different programs of instruction are asked how useful their training has been in their work, their answers obviously reflect the differences in these programs. It would be an unusual job that did not on occasion provide some opportunity to use the basic knowledge and communication skills included in a general education program. The much more discrete distribution of occupational skills in the labor market, however, limits the chances the vocational student has to use his training. A study of the Neighborhood Youth Corps has indicated that an enrollee must find a job that requires the skills he has studied if his training is to enhance his employability (Social Research Group, 1969). It naturally follows that some relationship must be present if a former trainee is to report that he used the abilities he acquired during his training. The chances for a vocational student to report such a relationship are thus much more limited than they are for a general education student.

It is with these qualifications in mind that the data in Table 18 should be examined. Most of the program dropouts and the control subjects said there was no relationship, or that they were not in the program long enough to learn anything. Of more pertinence to the hypotheses of this study is the absence of significant differences between the students in the two different experimental and the regular high school programs. As was pointed out above, the diploma program and the general curriculum covered quite different material than the skill training program and the vocational curriculum. Nevertheless, many of the diploma and general students reported considerable occupational use of what they learned while many of their skill training and vocational counterparts saw no relationship between their instruction and their jobs. These response patterns were quite consistent for the three jobs examined for all groups.

Student attitudes toward their training are only one of many criteria that were examined to evaluate the results of the different programs. But they are probably the best indication of the transfer of training received to the job. The data presented in Table 18 point up the necessity for students who have studied specific skills to find directly related jobs. If they are unable to do so, they are not more likely than students without vocational training to feel their education is useful in their jobs.

The subjects were asked how long they expected to stay at their jobs at the time they took them. Because they were asked this question during the regular follow-up surveys and not at the actual time they obtained the jobs, their answers were influenced not only by what their expectations actually had been but also by subsequent experiences on these jobs. Given this context for the question, the most surprising thing about the answers was the percentage who said they did not know how long they had expected to stay in their jobs. For the first job after the programs this figure was 26

TABLE 18

Job Relatedness Rating of Things Studied to Requirements
of First Jobs Following Programs and Most Recent Jobs, 1967 and 1969

	Diploma Completers			Skill Completers			Controls			Program Drop Outs[a]			High School General			High School Vocational		
	First job	1967	1969	First job	1967	1969	First job	1967	1969	First job	1967	1969	First job	1967	1969	First job	1967	1969
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
All the time	15	17	18	12	5	12	5	4	2	--	5	--	15	12	15	16	24	19
Most of the time	20	17	21	6	5	12	5	5	4	2	4	--	11	15	17	26	19	31
Sometimes	22	32	18	29	37	19	6	5	14	13	12	12	15	15	10	5	24	6
Hardly at all	15	12	16	12	5	--	5	7	8	8	10	2	20	20	17	16	10	12
Never	25	20	26	41	47	56	55	51	61	61	51	70	39	39	42	37	24	31
Not in program, other	2	2	--	--	--	--	24	27	10	16	18	15	--	--	--	--	--	--
Number	40	41	38	17	19	16	62	55	49	61	47	39	54	41	48	19	21	16

[a] Results for the dropouts from the diploma and skill programs did not differ significantly.

percent and for the most recent jobs of 1967 and 1969 it was 27 and 20 percent, respectively.

These results are another indication that, for a significant proportion of the subjects, at least one-quarter, jobs are not things which they deliberately select, prepare for, and seek. Rather jobs are things that happen to them. These young people do not feel they control the events in their vocational lives; they react to what happens to them. Their attitudes often reflect a realistic perception of the degree of control they actually have. Unfortunately, these attitudes not only reflect this lack of control but they also frequently contribute to it for they make such workers less likely to attempt to anticipate and influence some of the factors that affect their employment. This lack of planning was represented in about the same proportions in all the groups, including the regular high school graduates and there was no difference between students from the vocational and general curriculums.

INDICES OF EMPLOYMENT EXPERIENCES

The previous section presented information on the job hunt and the transition from education to employment; this section deals with the jobs that actually were obtained. The analysis is the same as in the previous section and focuses on first jobs held after the programs ended and the most recent jobs at the 1967 and 1969 follow-ups. The variables examined are job tenure, average wage, socioeconomic status of jobs, job satisfaction, and supervisors' ratings of the subjects performance.

Job Tenure

In all groups, except the program dropouts, the subjects were available for employment an average of fourteen to fifteen months between the end of the educational programs and the time of the first follow-up interviews. The subjects who withdrew from the experimental programs were considered to have entered the labor market at the time they left the programs; hence, the average interval from program withdrawal to interview was nineteen months. The subjects who completed the experimental programs, the control subjects, and the regular high school graduates were considered to be in the labor market only after the educational programs ended. The average for the regular high school graduates was the same as the other groups' even though their schooling ended three months earlier because this group had the most subjects who went on to full-time educational programs. Any month when the subjects were not available for employment due to full-time school attendance, sickness, pregnancy, military service, etc. was not included in the time available for employment. The time available for employment between the first and second follow-up interviews averaged between fifteen to sixteen months for all groups.

Table 19 presents the data on average job tenure for first jobs and most recent jobs at the 1967 and 1969 interviews. The figures show the length of time that each of these separate jobs was held, not the total amount of time employed during each of the follow-up periods. In each of these periods over 80 percent of the subjects held jobs in which they worked more than 30 hours per week. Thus, the figures in Table 19 are essentially months of full-time work. There are some differences among the groups, but due to the wide variability within each, they were not statistically significant.

The differences in Table 19, even though not significant, tend to favor the program dropouts and control subjects. It was explained above that the program dropouts did have a longer period of labor market participation. Although the control subjects, like the experimental subjects, were considered to have entered the labor market in October 1966, many of them held jobs prior to that date. Apparently the job experiences which the program dropouts and controls obtained while the other subjects continued their formal education meant as much in the labor market as the additional education and diplomas. The absence of significant differences indicates, at the least, that the control subjects and program dropouts did not have any less job tenure.

The results of the present study stand in contrast to those from some others which have demonstrated that training programs significantly enhanced the employability of trainees. A nationwide evaluation of institutional (not on-the-job) training conducted under the Manpower Development and Training Act reported by Main (1968) indicated that the trainees, both completers and dropouts, were employed more than a cohort sample without training. Similarly, Austin and Sommerfield (1967) have shown that high school dropouts who took vocational training were more likely to be employed in the month preceding the follow-up than matched controls without training. In another dropout study, quite similar to the present one, Hornbostel (1969) found that retraining of dropouts--academic, vocational, or a combination--caused them to be employed at least twice as many weeks as their controls during the year immediately after completing the program, but during the second year the difference was much less and not statistically significant.

The reasons for these differences are not completely clear, but the length of the follow-up period appears to be an important variable. Shorter follow-up periods tend to show more effects from participation in retraining programs. The question can be raised whether this increase in employment is due to the effects of the training or due to the placement activities of the program. The data from the thirty-three month period covered by this study suggest that the opportunities available to the trainees, which would be increased by placement efforts, are more important than the training itself.

TABLE 19

Number of Months Employed For the First Jobs After Programs and Most Recent Jobs, 1967 and 1969

		Diploma Completers	Skill Completers	Controls	Program Dropouts[a]	High School Graduates[b]
First job	Mean months worked	7.05	5.29	8.32	9.66	7.51
	Standard deviation	5.35	3.27	6.11	9.21	7.12
	Number	40	17	62	61	73
Most recent job, 1967	Mean months worked	7.66	5.63	6.73	8.79	7.59
	Standard deviation	5.35	4.45	5.87	9.12	6.12
	Number	41	19	55	57	62
Most recent job, 1969	Mean months worked	8.55	9.81	12.02	12.39	10.03
	Standard deviation	6.62	8.68	12.47	11.52	8.66
	Number	38	16	48	40	64

[a] Results for the dropouts from the diploma and skill programs did not differ significantly.

[b] Results for the graduates from the general and vocational curricula did not differ significantly.

Average Wage

The data for the starting and leaving wages for the three job periods are presented in Table 20. It is evident that the subjects in the skill training group were not earning as high a wage as members of the other groups. For every interview period their average starting wage, leaving wage, and wage increase were less than for the others. The control group was consistently higher in mean starting and leaving wage for both interview periods. Every group exhibited an increase in starting wages across jobs and also an increase in mean wages within these jobs. As can be seen by examining the standard deviations in Table 20, there was considerable variability within groups and the overall difference among groups was not significant. Once again the differences that do appear favor the control group and program dropouts.

Socioeconomic Status of Jobs

The jobs which the subjects held were classified by socioeconomic status, using the scale developed by Duncan (1961). This scale was constructed by having a national sample of respondents rate the prestige of various occupations, defined as the general standing of the occupation on a five point scale from excellent to poor. These ratings together with census data on education and income, by occupations, were used to drive a numeric scale. The scale ranges from a high of 96 for the occupations of dentists and osteopaths to a low of 0 for laborers in tobacco manufacture. Out of this possible range the jobs held by the subjects clustered toward the lower end. The largest proportion of first jobs for all groups fell in the 10 to 19 interval. Some typical occupations in this range are operatives in manufacturing plants, truck drivers, waitresses, hospital attendants, and gardeners. The means for the separate groups (Table 21) are somewhat higher than the median because about one-quarter of the subjects held first jobs with values of 40 or more. For the most recent jobs of 1969 the means for the skill training and high school graduate groups increased significantly. The large increase in the skill training group was surprising for this group consistently had the lowest mean wages and, generally, there is considerable correlation between socioeconomic status and income.

To obtain further information on the nature of the jobs the subjects held, they were compared by type of company. The results are shown in Table 22. The distributions for all groups, except skill training, are quite similar with manufacturing, wholesale and retail trade, and services predominant. The skill training group differs in the low percentage of its subjects holding manufacturing jobs and the high percentage in government jobs. This pattern was true for the first jobs and most recent jobs of 1967 and was even more accentuated for the most recent job in 1969. To determine the nature of the government jobs

TABLE 20

Starting and Leaving Wages for First Jobs After Programs and Most Recent Jobs, 1967 and 1969

Group		First Job			Most Recent Job, 1967			Most Recent Job, 1969		
		Starting wage	Leaving wage	Difference	Starting wage	Leaving wage	Difference	Starting wage	Leaving wage	Difference
		$	$	$	$	$	$	$	$	$
Diploma Completers	Mean wage	1.44	1.55	+.11	1.48	1.61	+.13	2.01	2.25	+.24
	Standard deviation	.56	.60	(n=40)	.59	.60	(n=39)	.88	1.05	(n=36)
Skill Completers	Mean wage	1.27	1.34	+.07	1.40	1.45	+.05	1.87	2.04	+.17
	Standard deviation	.49	.54	(n=17)	.50	.53	(n=19)	.48	.57	(n=16)
Controls	Mean wage	1.82	1.93	+.11	1.96	2.05	+.09	2.44	2.79	+.35
	Standard deviation	.62	.91	(n=62)	.97	1.01	(n=54)	.94	1.18	(n=48)
Program Dropouts[a]	Mean wage	1.64	1.80	+.16	1.82	1.97	+.15	2.13	2.37	+.24
	Standard deviation	.71	.85	(n=61)	.87	.98	(n=56)	.81	.96	(n=40)
H.S. Graduates[b]	Mean wage	1.65	1.83	+.18	1.67	1.82	+.15	2.02	2.25	+.23
	Standard deviation	.63	.49	(n=73)	.68	.75	(n=61)	.85	.88	(n=62)

[a] Results for the dropouts from the diploma and skill programs did not differ significantly

[b] Results for the graduates from the general and vocational curricula did not differ significantly

TABLE 21

Socioeconomic Index Rating for First Jobs After Programs and Most Recent Jobs, 1967 and 1969

		Diploma Completers	Skill Completers	Controls	Program Dropouts[a]	High School Graduates[b]
First job	Index mean	28.78	25.76	21.77	22.30	29.60
	Standard deviation	18.50	17.98	14.63	14.93	17.91
	Number	40	17	62	61	73
Most recent job, 1967	Index mean	24.27	32.42	19.14	21.11	29.89
	Standard deviation	14.98	21.87	15.43	14.32	16.77
	Number	41	19	55	57	62
Most recent job, 1969	Index mean	28.37	42.56	22.49	26.52	39.08
	Standard deviation	16.22	19.98	15.40	16.44	19.13
	Number	38	16	48	40	64

[a] Results for the dropouts from the diploma and skill programs did not differ significantly.

[b] Results for the graduates from the general and vocational curricula did not differ significantly.

TABLE 22

Company Type for the First Job After Programs and Most Recent Jobs, 1967 and 1969

Company type	Diploma Completers			Skill Completers			Controls			Program Dropouts[a]			High School Graduates[b]		
	First Job	1967	1969	First Job	1967	1969	First Job	1967	1969	First Job	1967	1969	First Job	1967	1969
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Contract construction	--	--	10	--	5	--	6	7	8	6	4	15	6	3	6
Manufacturing	20	20	18	6	5	6	22	23	40	33	30	28	23	19	22
Transportation communication & utilities	5	2	5	6	5	--	3	4	2	--	2	--	3	5	11
Wholesale & retail trade	35	39	26	35	10	19	27	18	12	20	19	2	33	32	16
Finance, insurance & real estate	--	--	--	--	5	--	--	--	--	2	2	30	7	11	9
Services	28	37	29	24	31	12	35	38	19	28	42	18	23	26	31
Government	12	--	10	29	37	58	3	9	15	2	2	5	3	--	3
Other & non-classifiable	--	2	--	--	--	6	2	--	4	--	--	2	1	3	2
Number	40	41	38	17	19	16	62	55	48	61	57	40	72	62	64

	1967	1969
Chi square	53.85	76.69
Degrees of Freedom	28	28
Probability	<.005	<.001

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[a] Results for the dropouts from the diploma and skill programs did not differ significantly.

[b] Results for the graduates from the general and vocational curricula did not differ significantly.

which the skill training subjects held their interview schedules were re-examined. It was found that most of the subjects classified as government employment were in poverty programs run by the local community action agency. These jobs had high socioeconomic ratings on the Duncan scale but were not considered as desirable as other jobs with similar ratings. Nor did they pay high wages. These jobs tended to raise the socioeconomic index of the skill group, while lowering its average wage. Since the skill training group had a large proportion of black females, many of whom were unwed mothers, their potential for employment in more competitive jobs was low. It appears that for these subjects the community action program was serving as an "employer of last resort."

Job Satisfaction

The subjects were asked to rate their satisfaction with seven different areas of their jobs on a seven point scale. A rating of one meant that the subject was completely dissatisfied and a rating of seven meant that he was completely satisfied. Table 23 presents the mean ratings and the within group ranks for these means. The results are generally quite similar both across groups and across the three job periods. Usually co-workers, or people's respect for the job, ranked highest in satisfaction while opportunities for promotion ranked last. There are, however, some interesting exceptions to this pattern. The subjects who had a high school diploma--the graduates of the experimental diploma program and the regular high school graduates--were less satisfied than the other subjects with the respect people had for their jobs. It may be that they felt the possession of the diploma qualified them for better jobs. The subjects who completed the skill training program were the only ones more satisfied with their opportunities for promotion than with their pay. It will be recalled that these subjects had the lowest paying jobs.

To check the validity of the ratings a more extensive measure was obtained of the level of satisfaction in most recently held jobs. This was the Job Descriptive Index (JDI) developed by Smith (1969). This is a check list of positive and negative words and phrases describing five work areas similar to five of the seven that were rated by the subjects: work, pay, supervision, opportunity, and people. In the JDI the word "people" was used instead of "co-workers." The range of possible scores is from 54 to zero.[1] The scores and the within group ranks for these scores are presented in Table 24.

Two statistical analyses were conducted to see how the two measures of job satisfaction compared. The first analysis consisted

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[1] The pay and promotion scales actually have half as many items as the other three. To make them comparable the group means for pay and promotion were doubled.

TABLE 23

Mean Satisfaction Ratings and Within Group Rank of Seven Job Areas for First Jobs After Programs and Most Recent Jobs, 1967 and 1969

Job area	Diploma Completers			Skill Completers			Controls			Program Drop Outs[a]			High School Graduates[b]		
	First job	1967	1969	First job	1967	1969	First job	1967	1969	First job	1967	1969	First job	1967	1969
	Mean rating														
Work	4.5	4.8	5.4	5.4	5.8	5.4	5.2	4.9	5.4	4.6	5.3	5.6	4.8	5.0	5.6
Pay	3.3	3.7	4.7	3.8	3.8	4.6	4.3	4.3	4.9	3.7	4.2	4.5	4.0	4.0	4.7
Hours	4.7	4.8	5.1	3.4	6.4	5.9	5.4	5.9	4.9	5.2	5.2	5.6	4.7	4.9	5.3
Supervision	5.3	5.5	5.4	5.8	6.5	5.4	5.4	5.6	5.4	4.4	5.6	5.7	5.2	5.4	5.7
Opportunity	3.2	3.2	4.2	4.3	4.2	5.0	3.5	3.8	4.1	2.9	3.8	3.7	3.4	3.6	4.3
Co-Workers	5.7	5.8	5.2	6.2	6.0	6.1	5.4	5.8	5.7	5.8	5.7	6.2	5.7	5.9	6.2
Respect	5.1	5.8	5.3	6.2	5.8	6.2	5.6	5.2	5.2	5.4	5.7	6.0	5.2	5.4	5.6
	Rank														
Work	5	5	1.5	4	5	5	5	5	3	4	5	5	4	4	3
Pay	6	6	6	7	7	7	6	6	5.5	6	6	6	6	6	6
Hours	4	4	5	5	2	3	4	4	5.5	3	4	3	5	3	5
Supervision	2	2	1.5	3	1	4	3	3	2	5	3	4	2	2	2
Opportunity	7	7	7	6	6	6	7	7	7	7	7	7	7	7	7
Co-Workers	1	1	4	1.5	4	2	2	2	1	1	2	1	1	1	1
Respect	3	3	3	1.5	3	1	1	1	4	2	1	2	3	5	4
Number	40	41	37	17	19	16	62	55	49	61	57	39	73	62	64

[a] Results for the dropouts from the diploma and skill programs did not differ significantly.

[b] Results for the graduates from the general and vocational curriculum did not differ significantly.

TABLE 24

Mean Job Descriptive Index Scores and Within Group Ranks of Five Job Areas for Most Recent Jobs, 1967 and 1969

Job area	Diploma Completer		Skill Completer		Controls		Program Dropouts[a]		High School Graduates[b]	
	1967	1969	1967	1969	1967	1969	1967	1969	1967	1969
	Mean									
Work	28.8	31.9	32.7	31.3	29.0	29.0	39.5	28.8	31.6	32.3
Pay[c]	25.1	31.5	26.9	26.6	24.3	31.0	23.1	31.2	29.2	20.5
Supervision	40.8	41.1	41.6	39.6	39.1	36.2	39.0	42.3	40.9	40.1
Opportunity[c]	20.9	22.7	24.8	27.5	26.2	27.5	21.3	23.5	20.8	26.6
Co-Workers	41.8	33.6	40.2	35.5	25.7	35.5	36.5	42.0	42.3	40.8
	Rank									
Work	3	3	3	3	3	4	3	4	3	3
Pay[c]	4	4	4	4	5	3	4	3	4	4
Supervision	2	1	1	1	1	1	1	1	2	2
Opportunity[c]	5	5	5	5	4	5	5	5	5	5
Co-Workers	1	2	2	2	2	2	2	2	1	1
Number	41	37	19	16	55	49	57	39	63	64

[a] Results for the dropouts from the diploma and skill programs did not differ significantly.

[b] Results for the graduates from the general and vocational curricula did not differ significantly.

[c] Means were doubled to make them comparable with the other scales.

of ranking the means in each group for both the JDI and the ratings for the five similar satisfaction areas. Rank order correlations were calculated for the two sets of rankings obtained for each group in both interview periods among both the full sample and the collated set of subjects. The results of this analysis showed the rankings to be quite similar. The median *rho* for the 1967 comparisons of all the subjects was .90 while for the 1969 comparisons it was .80. Of the twenty possible within group comparisons for the two measures, only two yielded differences in the ranking of a job area as large as two places.

The second analysis was an examination of the intercorrelations among the ratings and the JDI scores. These intercorrelations were arranged in the multitrait-multimethod matrix suggested by Campbell and Fiske (1959). The results showed that the five areas were relatively independent of each other. The correlations between the satisfaction rating and the JDI indicated that, except for "people-co-workers," the two measures of the four job areas correlated highly enough to have considerable confidence in the measures. The intercorrelation matrices for both the 1967 and 1969 comparisons are presented in Table 25.[2] The solid-line triangles show the correlations among different areas of job satisfaction measured by the same method. The broken-line triangles show the correlations among different areas measured by different methods. The diagonal between the two broken-line triangles shows the correlation of different measures of the same areas. In most cases the values in this diagonal exceed the values in the other triangles, thus demonstrating the validity of the measures. These intercorrelations indicated that actual feelings about the job were being tapped by the two techniques. The area of co-workers-people is the exception. The correlations for these scales were no higher than those among them and the other four satisfaction areas. It may have been that the subjects were referring to individuals other than co-workers when they responded to the word "people" in the JDI. With the exception of co-workers-people, the other measures were shown to have adequate validity.

All of these analyses thus tend to agree with one another and with other available data. In general, there were few differences among groups and the subjects seemed to be the most satisfied with those aspects of their jobs that were not directly related to the nature of their work but instead were of a personal or social nature. They were least satisfied with those areas which represented their jobs' benefits rather than the work or work conditions, themselves. Hornbostel et al. (1969) who studied similar groups--academic and vocational retraining groups and controls--also failed to find any significant differences in overall job satisfaction.

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[2] Because of the number of job changes, the JDI scores for 1967 and 1969 often refer to different jobs. For this reason the correlation between years was not calculated.

TABLE 25

Intercorrelation Matrices for the 1967 and 1969
Job Satisfaction Ratings and Job Descriptive Index Scores

	Job Satisfaction Ratings					Job Descriptive Index				
	Work	Pay	Supervision	Promotion	Co-workers	Work	Pay	Supervision	Promotion	People
1967 Ratings										
Work										
Pay	.41									
Supervision	.33	.16								
Promotion	.47	.35	.33							
Co-workers	.28	.14	.40	.31						
JDI										
Work	.60	.28	.37	.55	.30					
Pay	.37	.59	.17	.40	.16	.44				
Supervision	.34	.16	.56	.37	.26	.57	.28			
Promotion	.40	.27	.27	.73	.22	.56	.44	.44		
People	.34	.20	.38	.36	.35	.48	.26	.46	.36	
1969 Ratings										
Work										
Pay	.27									
Supervision	.31	.21								
Promotion	.34	.28	.16							
Co-Workers	.31	.02	.43	.15						
JDI										
Work	.56	.15	.31	.40	.23					
Pay	.39	.57	.24	.36	.52	.41				
Supervision	.44	.11	.40	.31	.15	.55	.30			
Promotion	.44	.25	.26	.62	.22	.50	.51	.38		
People	.31	.15	.36	.18	.31	.45	.21	.59	.29	

Supervisor Ratings

The questionnaires completed by the supervisors of approximately half the subjects contained rating scales on four areas of work performance. Each area consisted of four or five separate numerical rating scales, from 1 to 9, which were averaged to yield a mean area rating for each subject. The instruction to the supervisor defined a "1" rating as placing the employee "among the worst you have ever supervised" and a "9" as "among the best you ever supervised." It was decided to average the individual ratings rather than to sum them because some of the individual scales within each area were not applicable to certain jobs. The group means for the four areas are shown in Table 26 together with the means for ratings of overall performance and overall preparation.

The most striking feature of Table 26 is the similarity of the mean ratings across areas and across groups. The range of the means is from 5.1 to 7.5, and two-thirds are between 5.5 and 6.4. Despite this similarity, there are some differences which suggest the educational programs may have had some effect. The ratings of overall preparation for 1967 show the clearest pattern. The subjects who completed their programs had higher average ratings than the control subjects and the program dropouts. When compared in simple *t*-tests, these differences were statistically significant. However when they were analyzed by multiple regression techniques, as described in the next section, only one remained significant. In that one case the regular high school graduates of the general curriculum were higher than the control group.

The results of the supervisor ratings thus tend to agree with other data that have been presented which generally fail to show any positive effects from the education and training the subject received. The Hornbostel et al. (1969) study obtained almost identical results from supervisors. They found no significant differences among their three experimental groups (vocational, academic, and combination). Nor were the experimental groups different from the controls, although there was a slight (non-significant) preference for the subjects who had received training.

Reasons for Leaving Jobs

When asked why they had left their first jobs, the subjects gave similar reasons across groups, *e.g.*, having found a higher paying job, not liking the work, and being laid off. A large number of subjects, approximately 20 percent, did not answer the question or replied that they did not know why they left. When interviewed in 1967, 27 percent of the subjects were still employed at the job they had entered following the programs. The reasons given by the subjects for leaving their jobs did not change much across the job periods.

TABLE 26

Supervisor Ratings of Subjects' Work Performance
on Most Recent Jobs 1967 and 1969

	Diploma Completers		Skill Completers		Controls		Program Dropouts[a]		High School Graduates[b]	
	1967	1969	1967	1969	1967	1969	1967	1969	1967	1969
Occupational knowledge										
Mean	5.5	5.9	5.5	5.8	5.9	5.8	5.4	5.6	6.4	5.9
Standard deviation	1.9	1.4	1.2	2.0	2.2	1.8	1.6	1.6	1.9	1.8
Manipulative skills										
Mean	6.1	6.4	6.2	7.2	6.4	6.0	6.0	5.9	6.7	6.6
Standard deviation	1.8	1.4	1.3	1.4	2.0	1.8	1.3	1.6	1.5	1.5
Personal and social qualities										
Mean	6.9	6.3	6.6	5.9	6.0	5.5	6.0	6.1	6.7	6.4
Standard deviation	1.8	1.3	1.6	2.4	2.3	2.1	2.1	2.2	2.1	1.5
Work qualities and habits										
Mean	6.5	6.2	6.8	6.0	6.5	5.8	5.6	5.6	7.5	6.5
Standard deviation	1.8	1.7	1.9	2.0	1.9	2.1	2.1	2.4	1.3	1.5
Overall performance										
Mean	6.4	6.1	6.4	6.0	6.3	5.8	5.8	5.5	6.9	6.6
Standard deviation	2.6	1.2	1.3	1.7	2.4	2.0	1.6	2.3	1.7	1.4
Overall preparation										
Mean	6.6	5.9	6.7	5.3	5.2	5.6	5.1	5.6	6.7	6.3
Standard deviation	1.7	1.9	1.6	2.3	2.2	2.2	2.8	2.1	1.7	1.5
Number[c]	15-18	14,15	10-12	7-10	20-25	15,16	15-18	11-14	23-26	24-29

[a] Results for the dropouts from the diploma and skill programs did not differ significantly.

[b] Results for the graduates from the general and vocational curricula did not differ significantly.

[c] The numbers vary because not all of the ratings were completed by all supervisors.

Those subjects who had changed jobs queried on future job plans at the time of the changes. Although the distribution for the responses of the regular high school graduates was not significantly different from the distributions of the other groups, they did have a higher proportion of students replying that they left their first jobs because they planned to continue their education. This was also true for their most recent jobs in 1967. Otherwise the groups were fairly similar, and most of the subjects answered that they had found other jobs before making changes, or planned to look for other employment. For each job period about one-quarter of the subjects were uncertain of their future plans or did not answer the question. It will be recalled that this is the same proportion who were unable to estimate how long they would stay in their jobs. Their lack of future plans is another indication of their feelings of being unable to control their vocational lives.

MULTIPLE REGRESSION ANALYSIS OF EMPLOYMENT INDICES

The discussions in the preceding sections have dealt only with the subjects' first jobs following the programs and their most recent jobs of 1967 and 1969. Most of the subjects, however, held other jobs over this time period. This section presents an analysis of total employment experiences.

Because the job histories of the subjects were extremely varied, it was decided to derive indices for a number of measures of employment that could be applied across jobs. These indices could be applied to any subject's work experiences no matter how many jobs he had held. The derived indices examined in this section cover the variables of months employed, earnings, job-training relatedness, and job satisfaction. The manner in which these indices were constructed is described in Appendix B.

These indices were analyzed by multiple regression techniques. This type of analysis requires the construction of an equation containing independent variables, such as sex, race or education, that are hypothesized to influence a dependent variable such as earnings. Measures of all these variables are intercorrelated and the independent variables regressed against the dependent variable. The regression results yield an estimate of the degree to which variation in the dependent variable can be accounted for by variation in the independent variables. The results also yield an estimate of the net effect of each independent variable, holding constant the effects of all other independent variables in the equation. The independent variables that were used in these analyses were sex, race, educational program (diploma, skill training, control, etc.), number of jobs held, and three indices of employment during the program. It was hypothesized that those subjects who worked during the program might differ in consistent ways from those who did not. They might, for example, be harder workers or have additional family responsibilities. To the degree that the indices of employment during the program were correlated with the dependent variables of employment after the program, or with the other independent variables, the regression analysis controls for the effects of these differences among the subjects.

Multiple regression analysis is in some ways similar to an elaborate table of cross-tabulation that attempts to isolate the separate effects of sex, race, program experiences, etc. Such a cross-tabulation, however, is very difficult to interpret and each time another classification is added the number in the separate cells becomes smaller. Multiple regression does not have these disadvantages. It does, however, present the problem that complete information must be available on all variables that enter the equation. This requires that any subject for whom information is missing on any one variable be eliminated. Consequently the number of subjects in the regression tables is somewhat reduced.

The complete mutiple regression tables, which appear in Appendix B, contain separate results for each follow-up and for the total follow-up period. The analyses of the total period include all subjects who were interviewed during both follow-ups and those interviewed during the second follow-up, who could report their total work history from the end of the experimental programs. Table 27 summarizes the significant results for the total follow-up period for six of the complete tables. The "+" and "-" in the table indicate which of the independent variables had a significant relationship with the dependent variable listed at the top of each column and the direction of the relationships.

Employment and Earnings

It should be noted again that Table 27 presents only the significant results (.05 and .01 level) that were obtained. The regression equations do not, of course, explain all, or even most, of the variability in the dependent variables. Nevertheless, some are quite respectable for research on individuals. The $\underline{R}^2$ indicates the proportion of explained variability and an $\underline{R}^2$ of .25 is equivalent to a multiple correlation coefficient of .50. The higher $\underline{R}^2$'s often reported by economists are frequently based on aggregate rather than individual data.

Despite these fairly substantial $\underline{R}^2$'s, in most cases there were few significant coefficients for the program variables, and two that were present were negative. These negative coefficients indicate that when the effects of the other variables in the equation (sex, color, prior employment, etc.) were held constant, the subjects who obtained their diplomas through the experimental program had

TABLE 27

Summary of Multiple Regression Analyses of Employment Indices for the Total Follow-up Period

	Equivalent months worked		Total earnings		Average wage		Average monthly earnings		Wage Progression		Job-training relatedness	
Significance level	.05	.01	.05	.01	.05	.01	.05	.01	.05	.01	.05	.01
Intercept[a]						+		+				+
Male		+		+		+		+		+	-	
White												
Diploma completer	-		-									+
Skill completer												
Diploma dropout												
Skill dropout												
High school general									+			+
High school vocational												+
Number of jobs held		+	+									c
Job-training relatedness		+		+								b
Equivalent months employed during program		+								-		
Total earnings during program			+									
Number	232		232		232		232		232		232	
Explained variance ($\bar{R}^2$)	0.32		0.38		0.25		0.25		0.06		0.16	
Mean of dependent variable[c]	21.73		8614.		2.05		355.93		.032		2.05	
F-Ratio	10.70**		14.15**		8.07**		8.09*		2.31*		5.94*	

*Significant at p. <.05
**Significant at p. <.01

[a] Classification variables were coded so that results for control group blacks and females entered the intercept.

[b] Job-training relatedness was the dependent variable in this equation and the measures of employment during the program were not entered.

[c] These means are the actual value of the variables. In the complete tables in Appendix B they are expressed in index terms.

significantly fewer months of employment and less total earnings than the control group subjects.[3] Another significant coefficient indicated that the hourly wages of regular high school graduates from the general curriculum had increased at a faster rate than the control group's. There were three significant program coefficients for the job-training relatedness variable. These indicated that the subjects who completed the experimental diploma program and the regular high school graduates rated the usefulness of what they had studied higher than the control group subjects rated their participation in the guidance program.

Thus, the educational experiences to which the various groups of subjects were or were not exposed explained little of the variance in the employment and earnings variables. This was as true for the regular high school graduates as it was for the subjects who completed the experimental programs. Training or credentials seemed to make little difference in the labor market experiences measured by these indices.

The one variable in Table 27 that was consistently significant was sex. Males were employed more, were paid higher wages (and consequently earned more) and saw their education as less useful on their jobs than females. Since sex was such an influential variable in employment experience, it was decided to analyze the data separately for males and females. As would be expected, the $\underline{R}^2$'s dropped, especially for the male subjects. The patterns remained the same, however, and the significant program coefficients were mainly the same as those in Table 27.

Job Satisfaction

The results of the regressions on job satisfaction are not included in Table 27 for the $\underline{R}^2$'s are quite low (the highest is .08) and very few variables had significant regression coefficients. Table 27, however, covers the total period from the end of the educational programs to the final follow-ups. The individual tables in Appendix B present results for each of the follow-ups separately and when these are examined an interesting pattern emerges. There were seven job areas on which the subjects rated their level of satisfaction. For the first follow-up in 1967, the subjects who had diplomas, the subjects who completed the experimental diploma program and the regular high school graduates from the general and vocational curricula, were less satisfied than the control group in every case but one. That is, twenty out of the twenty-one regression coefficients (three groups times seven areas) were negative. Eight of the twenty coefficients were significantly greater than chance expectancy, and six of these eight were for the completers of the experimental diploma program. These results suggest that one effect of obtaining a diploma was to make the subjects who did so less satisfied with their jobs. This seemed to be especially true for those who completed the experimental program and somewhat less so for the regular high school graduates. Thirteen of the coefficients for the general curriculum and vocational graduates were negative, but only two were significant. For the 1969 follow-up the number of negative coefficients dropped to eleven, six of which were for the graduates of the experimental diploma program. However, none of these coefficients was significant.

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[3] The meaning of a significant partial regression coefficient for a set of categorical variables is interpreted in comparison to the elements in the set that enter the intercept term of the equation. For these equations the results for the control group members, females, and blacks entered the intercept. The results for educational program, sex, and color are thus interpreted as variations from these elements.

Why should obtaining diplomas make former high school dropouts less satisfied with their jobs? The most likely explanation is that earning the diploma caused their expectations of the kind of jobs they could obtain to rise. These expectations were not fulfilled in the labor market and the subjects were less satisfied with the jobs they actually obtained. It might be argued that the slightly less favorable labor market experiences of the diploma graduates account for their lower satisfaction. While this is possible, it should be recalled that these subjects had negative coefficients for all seven areas and six of these were statistically significant. The generality of these results suggests that the subjects' overall evaluations of their jobs were influenced by their completion of the program. The most likely direction for such influence would be an increase in expectations which was subsequently not fulfilled. The lack of significant differences in the second follow-up period--although six of the coefficients were still negative--could be attributed to a lowering of expectations after exposure to the realities of the labor market.

Supervision Ratings

The regression analysis of the supervisor ratings was similar to the analysis of job satisfaction in that it yielded quite low coefficients of determination and few significant regression coefficients. The equation used in this analysis included only sex, race, and program as independent variables. The dependent variables were the means of the supervisors' ratings for four work areas and two overall ratings of performance and preparation. The tables containing these analyses are included in Appendix B. The highest $\underline{R}^2$ obtained was .11 for work habits in 1967, but in 1969 the $\underline{R}^2$ for this variable fell to .00. There was only one significant regression coefficient for any of the program variables. In 1967 regular high school graduates of the general curriculum were found to have higher ratings than the control subjects on the overall preparation scale. This result was not found in the 1969 data.

SUMMARY

The multiple regression analyses presented in the last section largely of the chapter confirm the less sophisticated analyses presented earlier. Because of the relatively small number of subjects in each group, it was impossible to use cross-tabulation methods to assess the effects of such variables as sex and color upon the employment experiences of the subjects. Multiple regression analysis provided a way to estimate the independent effect of each variable entered into the equation.

The analysis showed that the education experiences of the subjects had relatively little effect upon their employment. The most important variable in the equations was the sex of the subjects. Males worked more and earned more than females. There was evidence that the subjects who completed the diploma program were less satisfied with their jobs during the first follow-up period than the control subjects. This suggests that obtaining a diploma led to an increase in job expectations that were not fulfilled in the labor market. During both periods, the equation used in the analyses could explain only a small fraction of the variability in the satisfaction ratings of the subjects. Similarily, regression analyses of the supervisor ratings could explain little of their variability. The point of interest, however, is not the low proportion of explained variance but that there was so little difference in employment, earnings, job satisfaction or supervisory ratings among subjects who differed so widely in educational preparation.

CHAPTER 4

THE EFFECTS OF THE PROGRAMS ON ATTITUDES, EDUCATION, AND CITIZENSHIP

While the main criteria by which retraining programs are evaluated concern their effects upon employment, they are often claimed to have other desirable effects. The hope is often expressed that the completion of a training program by people who have previously failed in education and employment will enhance their sense of personal worth and yield increased confidence in their ability to control the events in their lives. These are, without doubt, worthwhile goals and, if a program can possibly attain them, it should strive to do so.

When the best methods for achieving such goals are discussed, it is often claimed that an education aimed at increasing the general competency of a person is inherently better than specific skill training. It is further claimed that general education prepares students to continue their education and to be self-directed learners. Another benefit often claimed for general education is that it produces students who have an increased awareness of their society and of their responsibilities as citizens.

This study, which compared general and skill training programs for both school dropouts and graduates of a regular high school provided an opportunity to test the claims made for the general approach. To do so questions were asked about attitudes and behavior which are related to these claims. The answers obtained to these questions are presented in this chapter. They are organized into two major sections titled: "Attitudes Toward Program and Self," and "Additional Education and Citizenship."

The first section presents general evaluations of the programs in which the subjects participated, their feelings about themselves, their values and goals. Most of the subjects gave favorable responses to questions about the programs, even the program dropouts and control subjects. The subjects who had completed the diploma program were most positive while the skill training subjects, both completers and dropouts, reflecting the attitudinal tone of their program were most negative. There were few consistent differences among the respondents on the measures of self-evaluation and values. Completion of the experimental programs did not appear to affect self-esteem or personal goals and expectations.

The evidence to be presented in the second section of this chapter also fails to indicate differences among the experimental groups with regard to additional education or citizenship behavior. The differences that were found tended to be in favor of the regular high school graduates. That is, these graduates were more likely to continue their education and to be more knowledgeable about political affairs. None of the groups, however, demonstrated any significant effects of their educational experiences on questions regarding the use of mass media, voting in general elections or participation in union affairs. Thus, the results presented in this chapter agree largely with those on employment experiences presented in Chapter 3. They agree in that they both demonstrate very little effect attributable to completion of the experimental programs or even graduation from a regular high school.

ATTITUDES TOWARD PROGRAMS AND SELF

Subjects' Evaluations of Programs

The subjects were asked four general questions that required them to evaluate the experimental or high school program in which they had taken part: whether they thought it worthwhile, whether they got what they had wanted, whether they would do the same thing over again, and whether they had suggestions for change. The question on the program's worth was asked during both the 1967 and 1969 interviews. The questions of whether the subjects got what they wanted and would they do the same thing over again were only asked in 1969; while the questions concerning their suggestions for program improvement were asked only during the 1967 follow-up interview. The data to be presented represent all of the subjects who were interviewed; however, a collated set of data which consisted of only those subjects interviewed both in 1967 and 1969 was generated. All conclusions drawn from the full sample of subjects were checked against this collated set and the differences if any, are noted.

The subjects were asked to look back on the program in which they had participated or on the in-high school experience and to judge whether they felt that it had been worthwhile. It should be noted that the answers of the various dropout subjects had quite different referents. Some referred to education and training programs which they had completed; others to the same programs but from which they had withdrawn; and others, the controls, to a guidance program that consisted of a few testing and interview sessions. Table 28 indicates that for both interviews significantly more diploma completers than skill completers felt that their program had been worthwhile. In 1967 more in the diploma group replied that personal improvement made the program worthwhile for them; more in the skill training group cited vocational improvement. By 1969 the proportion in both groups who felt that the program was worthwhile was distributed similarly between personal and vocational improvement.

TABLE 28

Subjects' Evaluation of Worth of Programs

Program Worthwhile	Diploma Completers 1967	1969	Skill Completers 1967	1969	Controls 1967	1969	Diploma Dropouts 1967	1969	Skill Dropouts 1967	1969	High School General 1967	1969	High School Vocational 1967	1969
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Yes, Personal improvement	67	59	32	48	44	50	78	30	56	35	49	38	35	17
Yes, Vocational improvement	25	41	44	32	18	11	9	30	6	18	34	32	65	61
No	6	--	24	20	30	39	13	30	38	47	17	26	--	22
Neutral	2	--	--	--	3	--	--	5	--	--	--	2	--	--
No answer - Do not know	--	--	--	--	4	--	--	5	--	--	--	2	--	--
Number	51	46	25	25	66	62	23	16	57	49	47	50	23	18
	1967		1969				1967				1967			
Chi Square	10.69		9.78				16.13				8.00			
Degrees of freedom	3.		2.				4.				2.			
Probability	<.05		<.01				<.005				<.05			

There remained, however, a significant proportion of the skill group, one-fifth, who considered the program had been of use to them.

The reason the skill training students were dissatisfied was attributable primarily to the attitudes of those who conducted the program. The administrator and most of the teachers from this program felt that their students had limited learning capacity and consequently they gave them a minimal program - a perfect example of a self-fulfilling prophecy (see Rosenthal and Jacobson, 1968). The interim report on this study, whose major results are summarized in Chapter 2, was largely concerned with analyzing the reasons for the difference in the attitudinal tone of the two programs. These reasons are also discussed in Chapter 5 of this report.

Over 60 percent of the control group subjects perceived their program as being worthwhile in both interviews--large proportions considering its limited nature. These figures indicate the reluctance of most people to say negative things about programs that are supposed to help them, no matter how minimal the programs may be. The programs must be quite inadequate to bring forth negative comments. Even among the subjects who withdrew from the experimental programs, less than half said the programs were of no use to them.

In 1967, there was a significant difference between the program dropouts who had been in the diploma group and those who had been in the skill training group. More diploma dropouts saw their program as beneficial. Within both groups the most of those who thought their program had been useful attributed its value to personal improvement. By the time of the 1969 interview, the two dropout groups no longer differed significantly: fewer from both viewed their programs as helpful.

At the time of the 1967 interview the two regular high school groups were also significantly different in their evaluations. More of the vocational students felt that their program was worthwhile, and they were also more inclined to give vocational improvement as the reason. By 1969, these two groups were no longer significantly different for the full sample of subjects, although, among the collated subjects the significance remained. The vocational graduates still tended to attribute the value of their education to vocational improvement more so than the general program graduates.

In the 1967 interviews, conducted a little more than a year after the experimental programs ended, the subjects were asked what they thought could have been done to make them better. A majority in all but the skill program were unable to make any suggestions (Table 29); those who had been in the skill program, both completers and dropouts, tended to be much more critical, especially to their teachers. Table 29 indicates that the negative attitudes of many of the teachers in the skill training program were sufficiently evident to many of the students that they commented on them over a year after leaving the program.

TABLE 29

Subjects' Suggestion for What Could Have
Made the Programs Better, 1967 Follow-up

Suggested changes	Diploma Completers	Skill Completers	Controls	Diploma Dropouts	Skill Dropouts	High School Graduates[a]
	%	%	%	%	%	%
Courses	22	12	3	13	5	21
Administration	2	4	2	4	7	--
Teachers	2	20	6	9	26	16
Counselors	--	4	3	4	--	1
Other students	2	8	5	9	10	--
Meeting time	2	--	11	9	3	--
Physical plant	2	8	2	--	18	3
Length of program	6	8	3	--	3	1
Do not know	63	36	52	52	23	53
No answer	--	--	15	--	4	4
Number	51	25	66	23	57	70
Chi Square	15.98			17.49		
Degrees of freedom	8.			9.		
Probability	<.05			<.05		

[a] Results for the graduates from the general and vocational curricula did not differ significantly.

During the 1969 interviews almost three years after the experimental programs ended--the subjects were asked, "Do you feel you got out of it (the Penn State programs or high school) what you hoped you would get when you started?" If they had not obtained the results they had anticipated, it seemed likely that indications of this disappointment would be evident. The differences in goals and attitudinal tone of the two programs are reflected in the responses shown in Table 30. As was expected, a diploma was the feature most often mentioned by the subjects who completed the diploma program; more surprisingly it was also the most frequently mentioned by the skill graduates. This was because they had the opportunity to prepare for and take the General Educational Development examinations, successful completion of which yielded a high school equivalency diploma awarded by the state. The University provided workbooks which the students studied on an individual basis. This opportunity was also provided the subjects in the control group. The program did not provide formal instruction for the examination.

Given the reluctance of subjects to criticize a program designed to help them (Campbell, 1969) it is significant that 20 percent of the skill group said it was the program's fault that it failed to provide what they hoped for. The proportion of control subjects and program dropouts who gave this response was nearly the same as in the skill group, but the controls and program dropouts were much more likely to attribute the failure to get what they wanted to their own inadequacies rather than to those of the programs.

The regular high school graduates did not place as high a value on acquiring a diploma as the dropouts, probably because most of them had assumed throughout high school that they would obtain one. They had not experienced the frustration of failing to achieve this goal and of being stigmatized, both from others and themselves as "dropouts". It is clear that among the regular graduates the vocational students put most emphasis on preparation for employment. A sizable proportion of both groups (one-third or more) were dissatisfied with the results of their education.

As a final direct evaluation of the subjects' attitudes toward the programs or high school, they were also asked during the 1969 interview whether they would do the same thing again if they could go back to the time when they had started. The results presented in Table 31 once again show the diploma completers as most satisfied and even about half of the controls and program dropouts as willing to do the same thing again. It appears that the experimental subjects responded primarily in terms of whether or not they would complete their program. In comparison, the regular high school graduates were more concerned with what they would do differently within the program.

TABLE 30

Evaluation by the Subject of Whether They Got What They Wanted from the Programs, 1969 Follow-up

Get what wanted	Diploma Completers	Skill Completers	Controls	Program Dropouts[a]	High School General	High School Vocational
	%	%	%	%	%	%
Yes, Diploma	63	24	5	--	14	11
Yes, Skill	2	16	--	2	11	6
Yes, Education	15	12	6	12	30	17
Yes, Employment	9	4	5	3	6	33
Yes, Self-improvement	2	8	8	3	6	--
Yes, Other	--	4	2	5	--	--
No, Personal reasons	2	8	48	58	22	22
No, Program's fault	2	20	26	15	18	11
No, Social problem	4	4	--	2	--	--
No answer - Do not know	--	--	--	--	4	--
Number	46	25	62	65	50	18
Chi Square	20.57				13.41	
Degrees of freedom	8.				7.	
Probability	<.01				.06	

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[a] Results for the dropouts from the diploma and skill programs did not differ significantly.

TABLE 31

Subjects Who Would Do the Same Thing Over if They Could Start Again, 1969 Follow-Up

Do same thing over	Diploma Completers	Skill Completers	Controls	Program Dropouts[a]	High School Graduates[b]
	%	%	%	%	%
Yes	93	72	55	43	50
No, complete program or high school	--	--	21	40	1
No, work harder	--	4	6	3	19
No, take different course	2	12	5	3	15
No, would not attend	--	4	5	5	3
No, other	2	8	8	5	9
No, no reason	--	--	--	2	--
No answer--Do not know	2	--	--	--	3
Number	46	25	62	65	68

[a] Results for dropouts from the diploma and skill programs did not differ significantly.

[b] Results for graduates from the general and vocational curricula did not differ significantly.

Feelings About Oneself

The successful completion of a training or educational program, especially when combined with the attainment of a diploma, was hypothesized to yield increases in feelings of satisfaction with oneself, raise expectations and aspirations, and heighten confidence in one's ability to control the events in his life. To assess whether such changes did take place two techniques were employed, the Adjective Check List (Gough and Heilbrun, 1965) and a series of open-ended questions. Neither yielded consistent evidence of the hypothesized effects. Those differences which did occur tended to show the regular high school graduates in the most favorable light--they had slightly more positive feelings about themselves and were a little more likely to believe they controlled their lives. Most of the results, however, failed to indicate any significant differences among the groups.

Adjective Check List: The Adjective Check List (ACL), consisting of 300 descriptive adjectives, is a standardized measure of feelings about oneself. During each administration the subjects were instructed to mark those adjectives they felt described themselves. The scale that was analyzed by groups was the favorability scale, based on the 75 most favorable words in the list. Each subject's raw score was converted to a T-score to control for variability in the number of words checked. The T-distribution has a mean of 50 and a standard deviation of 10.

For the experimental and control subjects the ACL was administered during the pre and posttest sessions and during the two follow-up interviews. For the regular high school graduates the ACL was administered in school shortly before they graduated and during the follow-up interviews. The scores obtained during the experimental phase of the project, summarized in Chapter 2, showed that the groups were comparable on the pre-test measure, but the subjects who completed the diploma program increased significantly from pre and posttest while the other groups did not.

The analysis of the scores obtained during the follow-ups failed to reveal the same difference. Table 32 shows the means for 1967 and 1969. (These means are based on all interviews. The figures for the collated subjects, those who were interviewed both times, are quite similar.) Their rank order seems to reflect some program effects. The regular high school graduates are highest, the program completers are next, and the controls and program dropouts last. None of the differences was, however, significant.

A regression analysis of the favorability scores was performed controlling for sex, race, and IQ while assessing the effects of program classification. The complete tables are presented in Appendix B. This equation explained little of the variability in the

TABLE 32

Mean Favorability Toward Self Scores
From Adjective Check Lists, 1967 and 1969

	Diploma Completers	Skill Completers	Controls	Program Dropouts[a]	High School Graduates[b]
1967					
Mean	47.63	47.58	45.63	46.95	49.91
Std. deviation	10.37	12.18	10.15	10.32	10.92
Number	49	24	60	78	70
1969					
Mean	48.80	49.91	46.30	44.77	50.98
Std. deviation	11.52	9.46	10.46	11.73	8.88
Number	41	23	53	52	57

[a] Results for the dropouts from the diploma and skill programs did not differ significantly.

[b] Results for the graduates from the general and vocational curricula did not differ significantly.

favorability scores. The proportion of explained variance ($\underline{R}^2$) was .07 both years. In 1967 none of the programs had significant regression coefficients; in 1969 the regular graduates of the vocational curriculum were found to have significantly higher scores than the control subjects.

In addition to these intergroup comparisons of the ACL favorability scale, a more complex analysis of all the ACL scales was conducted which employed the statistical procedure known as factor analysis. Factor analysis involves complex mathematical manipulation of data, but its goal is rather simple. It is a method of describing a large number of variables in terms of a more limited number of underlying factors. A satisfactory solution will convey all the essential information of the original set of variables. The twenty-four standard scales of the ACL were intercorrelated and factor analyzed to determine if there were more basic concepts of self underlying the response tendencies reflected in these scores.

Before conducting the factor analysis the sample was reduced to those subjects for whom data were available for all administrations of the ACL. This permitted comparisons to be made across administrations, and assured that the factors extracted reflected differences across time and not differences in the composition of the subjects. Selecting only those subjects for whom complete data were available reduced the available number to eighty-five experimental subjects and forty regular high school graduates. This reduction made it impossible to conduct intergroup comparisons of the factors. All the experimental subjects (program completers, program dropouts, and controls) were combined for these analyses. The mean scale scores for these subjects and the regular high school graduates are presented in Table 33 and the factor loadings extracted from these scores are presented in Tables 34 and 35.

Examination of the means alone suggests that the regular high school graduates generally had slightly more positive feelings about themselves. They tended to have higher favorability, self-confidence, achievement, and personal adjustment, endurance, and dominance scores and lower unfavorability scores. Almost all of the changes over time suggest increasingly more positive feelings about oneself among both the experimental subjects and high school graduates.

The trends which seem to be evident from an examination of the means are not reflected in the patterns of factor loadings that emerged from the analysis. Factor loadings can be interpreted similarly to a correlation coefficient. The closer a loading approaches + 1.0 the more the variable is reflected in the factor. The more a loading approaches - 1.0 the more the opposite of the variable is reflected. Variables with loadings between + .30 and - .30 can be disregarded in interpreting the meaning of a factor.

Any factor analysis is limited by the reliability of the measures on which it is based. The patterns that are shown in Tables 34 and 35 are highly consistent, considering that the test-retest reliability coefficients for the separate scales were generally in the .50s and .60s. For the experimental subjects 11 of the 12 possible intercorrelations of the factor loadings across administrations were in the .90s, 10 were .94 or higher and the lowest was .83. For the high school graduates the intercorrelations were slightly lower, ranging from .73 to .96 with three of the six intercorrelations in the .90s. (The ACL was administered one less time to the regular graduates and thus the number of intercorrelations was reduced.) For each analysis six factors were extracted, but the third through sixth factors did not yield reliable loadings.

It is clear that the factor analyses yielded two highly consistent response tendencies for all administrations of the ACL. The loadings for the first factor (accounting for about 40 percent of the variance) reflect a tendency to give the socially desirable response. The high loadings on defensiveness, favorability, self-confidence, and personal adjustment indicate that the subjects described themselves primarily with positive adjectives. Such

TABLE 33

Mean Adjective Check List Scores for Subjects for Whom Complete Data Were Available

Scales	Experimental Subjects N = 85				High School Graduates N = 40		
	Pretest	Posttest	First Follow-up	Second Follow-up	In-School	First Follow-up	Second Follow-up
Number Checked	50.5	50.6	49.2	46.0	44.7	47.6	48.5
Defensiveness	46.0	45.3	48.2	48.5	50.2	50.6	51.2
Favorability	45.1	45.8	47.4	48.5	49.8	49.4	50.7
Unfavorability	52.9	51.4	49.6	49.0	45.1	48.2	46.8
Self-Confidence	44.0	45.8	47.0	46.5	47.3	47.5	48.9
Self-Control	46.3	46.5	48.2	49.1	49.8	47.5	49.0
Lability	46.4	45.5	44.7	46.7	44.7	46.4	46.4
Personal Adjustment	45.1	45.0	45.6	47.0	48.2	48.0	50.0
Achievement	45.4	46.6	48.1	48.5	50.3	49.4	50.6
Dominance	46.1	48.9	50.1	50.4	49.4	50.6	52.2
Endurance	47.4	47.3	50.1	50.8	52.2	50.1	52.0
Order	44.9	46.1	47.4	47.2	49.9	48.0	48.6
Intraception	45.1	44.9	46.3	46.8	47.0	49.1	50.2
Nurance	47.1	46.7	48.2	50.0	50.4	50.0	51.5
Affiliation	46.4	45.0	46.1	47.2	49.6	50.2	51.0
Heterosexuality	51.4	52.2	51.6	52.5	49.5	50.5	50.9
Exhibitionism	50.4	51.4	51.3	51.5	51.4	51.4	52.1
Autonomy	49.7	51.6	50.2	49.4	47.4	48.3	50.3
Aggression	50.5	52.6	50.9	49.6	48.4	49.5	49.6
Change	48.2	48.5	48.2	47.8	49.2	50.4	49.0
Succorance	52.6	51.0	56.4	48.6	48.4	50.8	48.4
Abasement	51.7	48.7	48.1	48.3	50.3	50.0	48.1
Deference	50.6	47.3	48.8	50.0	52.2	51.4	50.6
Counseling Readiness	49.8	49.7	47.8	47.5	44.7	44.8	45.4

TABLE 34

Loadings for Factor One of Adjective Check List

Scales	Experimental Subjects N = 85				High School Graduates N = 40		
	Pretest	Postest	First Follow-up	Second Follow-up	In-School	First Follow-up	Second Follow-up
Number Checked	-.04	.05	.10	.17	-.02	-.04	.01
Defensiveness	.70	.76	.87	.79	.87	.88	.87
Favorability	.64	.81	.88	.89	.90	.86	.83
Unfavorability	-.61	-.57	-.50	-.72	-.41	-.34	-.42
Self-Confidence	.25	.10	.19	.19	.66	.10	.22
Self-Control	.74	.70	.73	.82	.80	.80	.78
Lability	-.17	-.01	-.04	-.06	.12	-.26	-.12
Personal Adjustment	.63	.81	.76	.86	.93	.78	.77
Achievement	.79	.34	.72	.62	.88	.54	.64
Dominance	.59	.16	.54	.36	.82	.44	.35
Endurance	.87	.48	.85	.87	.84	.87	.84
Order	.86	.45	.75	.82	.80	.90	.84
Intraception	.52	.71	.83	.83	.84	.81	.77
Nurance	.49	.81	.86	.87	.83	.86	.80
Affiliation	.41	.81	.81	.74	.87	.86	.82
Heterosexuality	.09	.59	.26	.53	.31	.50	.28
Exhibitionism	-.21	-.18	-.03	-.11	.00	.01	-.10
Autonomy	-.22	-.48	-.34	-.51	-.11	-.52	-.32
Aggression	-.42	-.71	-.69	-.79	-.84	-.75	-.69
Change	-.00	.19	.08	-.00	-.03	-.04	-.19
Succorance	-.62	-.40	-.37	-.39	-.78	-.17	-.44
Abasement	-.14	.15	.02	.08	-.34	.09	-.05
Deference	.25	.56	.50	.51	.29	.56	.51
Counseling Readiness	-.19	-.54	-.39	-.34	-.43	-.54	-.08

TABLE 35

Loadings for Factor Two of Adjective Check List

Scales	Experimental Subjects N = 85				High School Graduates N = 40		
	Pretest	Posttest	First Follow-up	Second Follow-up	In-School	First Follow-up	Second Follow-up
Number Checked	-.14	-.00	-.04	-.09	.13	-.11	.10
Defensiveness	.06	-.07	-.09	-.13	.16	-.09	-.01
Favorability	.05	-.12	-.14	-.14	.18	-.24	-.23
Unfavorability	-.17	-.03	.01	-.07	-.05	-.01	.02
Self-Confidence	-.68	-.66	-.83	-.59	-.40	-.84	-.84
Self-Control	.46	.14	.21	.10	.33	.25	.23
Lability	-.09	.22	-.13	-.08	-.00	-.16	.00
Personal Adjustment	.21	.01	.03	.01	.08	.00	.02
Achievement	-.28	-.30	-.52	-.47	-.06	-.74	-.60
Dominance	-.69	-.71	-.79	-.80	-.07	-.82	-.81
Endurance	.01	.02	-.23	-.21	.19	-.09	-.23
Order	.03	-.06	-.16	-.11	.14	-.22	-.15
Intraception	.31	.09	-.02	.06	-.08	-.06	-.35
Nurance	.36	.21	.26	.19	.26	.17	.18
Affiliation	-.04	-.19	-.10	-.15	.15	-.11	-.02
Heterosexuality	-.03	-.06	-.04	-.06	.31	-.27	-.08
Exhibitionism	-.74	-.76	-.69	-.58	-.14	-.72	-.56
Autonomy	-.77	-.60	-.62	-.68	-.84	-.64	-.77
Aggression	-.54	-.30	-.50	-.34	-.25	-.49	-.51
Change	-.31	-.27	-.22	-.29	-.04	-.62	-.31
Succorance	.39	.59	.49	.56	.32	.43	.70
Abasement	.90	.90	.88	.90	.53	.83	.90
Deference	.77	.58	.64	.66	.87	.69	.69
Counseling Readiness	.16	-.08	-.20	-.08	-.65	-.25	-.11

a tendency is, of course, highly understandable. Social desirability as a characteristic of self-report instruments has received considerable research attention (see Edwards, 1957). As well as reflecting such a characteristic, however, this factor may also reflect the very natural tendency of most people to see themselves in a favorable light.

The second factor is of more interest to the present study. The high positive loadings for abasement and deference and the high negative loadings for self-confidence, dominance, exhibitionism, and autonomy seem to reflect basic feelings of dependency and powerlessness. Powerlessness has frequently been suggested as a basic characteristic of poor people (see, Galdwin, 1961; Haggstrom, 1964; Irelan, 1966). Lack of money, power, and influence engenders feelings that one is unable to control the events in his life. Such feelings may often be quite accurate and also serve an adaptive purpose in allowing the poor person to disclaim responsibility for his impoverished circumstances (Gurin, 1970). They may, however, also help to perpetuate poverty by making people with such feelings less likely to attempt to alter their circumstances, even in those areas where their efforts may have some influence.

It is of interest that the powerless pattern was as evident among the regular high school graduates as it was among the experimental subjects. The graduates were matched with the other subjects as closely as possible. There may have been sufficient similarity in their backgrounds to produce similar self-perceptions, even though most other indicators suggest the regular high school graduates came from slightly better circumstances. Whatever the explanation, it is clear that the second factor indicates a tendency to take a subordinate position and to avoid actively asserting oneself. It is equally clear that this tendency was as evident among the regular graduates as it was among the experimental subjects.

Interview Results: In addition to the measure of self-evaluation obtained from the Adjective Check List several questions were asked about individual goals, income estimates, and attitudes toward ones status in life. These questions, like almost all others in the interviews, attempted to determine if there was a pattern of responses associated with completing the program and obtaining a diploma. As it turned out, there were very mixed response patterns and few indications of any educational effects. Nor was there much consistency from the first interview to the second.

One of the questions, for example, asked the subjects what they considered "the most important things in a person's life." The free response answers were coded into three categories. The first reflected an emphasis on individual pleasure and happiness; the second an emphasis on affiliation with family and friends, and the third an emphasis on individual achievement and "getting ahead," including the possession of material things. It was anticipated that the subjects who completed the diploma program and who graduated from the regular high school would be heavily represented in the third category. In 1967, however, fewer than one-fifth of the subjects who completed the diploma program and only about one-third of the regular high school graduates stressed individual achievement in their answers. The subjects who withdrew from the skill program had the same percentage as the regular high school graduates.

This proportion of the skill program dropouts was the most surprising for these subjects had achieved the least: they had quit the skill training program and had the highest percentage unemployed after leaving the program. It is possible that they valued achievement highly because they, themselves, had experienced so little of it. No matter what explanations could be advanced to explain the various differences that were found, however, it is clear that the answers did not reflect individual differences associated with obtaining a diploma.

A number of similar questions were asked such as: "What sort of person would you really like to be?"; "What kind of neighborhood would you like to live in?"; and "Do you ever feel you are getting a dirty deal from life?" The respondents were also asked how they defined success among their own acquaintances. These questions, too, failed to reveal any response patterns that could be related in a systematic way to the education the subjects had or had not experienced.

Even though the answers could not be correlated with other information, some unexpected patterns were obtained. On the question about a "dirty deal" from life, for example, very few of the subjects (5 to 10 percent) felt that they always got a dirty deal. About half, however, felt that they did sometimes, and a little less than half felt they never did. Just as on the question about the most important things in a person's life, the skill training subjects differed furthest from expectations. Both those who completed the skill program and those who withdrew, tended to come from the most disadvantaged circumstances. They also had the largest proportion of subjects who failed to find employment during the follow-up periods. Nevertheless, they had as high a percentage as any group (56 percent in 1967 and 46 percent in 1969) who never felt they were getting a dirty deal. These answers seem to suggest that the skill subjects had a stronger tendency to give answers that they perceived as socially acceptable, or what they thought the interviewers wanted to hear. The question then becomes why this tendency would be stronger among them, a question the data available to this study cannot answer.

To obtain another perspective on the subjects' expectations they were asked to estimate how much per week they would need to earn to get along barely in life, and to be really well off, as well as what they actually expected to earn. (The analysis of these estimates is limited to the subjects who were interviewed during both follow-ups in order to detect changes over time.)

The mean estimates of the amount of weekly income necessary to barely get along and what they actually expected to earn were fairly consistent from 1967 to 1969 although they increased considerably. The estimates of the amount necessary to be really well off were more erratic. Even for the more consistent estimates, however, there was little indication of any effect of educational experiences. The regular graduates from the vocational curriculum had the lowest mean estimates of the amount needed to barely get along ($65 per week in 1967, $82 in 1969) while those who graduated from the general curriculum had among the highest ($83 in 1967, $120 in 1969). With regard to the amount they actually expected to earn, those who earned a diploma in the experimental program had the lowest estimates in both 1967 ($94) and 1969 ($115). In contrast subjects who dropped out of the diploma program had the highest estimates both years ($142 in 1967, $178 in 1969).

It could possibly be argued that money was more important to those subjects who withdrew from the experimental programs. But such ad hoc explanations are not very useful unless they can be related to other data, and there is little to support such a conjecture. The evidence that those who completed the diploma program had the lowest income expectations is definitely contrary to the interpretation advanced at other points in this report that completing the diploma program tended to raise expectations.

In addition to these questions, which failed to indicate any of the predicted program effects, certain others yielded some suggestive, if not conclusive, results. One dealt with feelings of control over one's future. The percentage who felt they had "much" or "very much" control ranked in a predictable way, with the regular high school graduates highest (72 percent), followed by the subjects who completed the experimental programs, the control subjects next, and those who withdrew from the experimental programs lowest (49 percent). The percentages reported are for 1969. In 1967 they were almost the same except that the subjects who completed the skill training program had the lowest percentage (45 percent) who felt they had much or very much control. Similar group rankings were found for the question, "If someone handed you $500 tomorrow, what do you think you would do with it?" The answers were coded to reflect an immediate or future orientation. Future orientations were slightly more common among the regular high school graduates and the subjects who completed the experimental programs than they were among the controls and program dropouts.

Some of the most interesting results, related to general attitudes and aspirations, were derived from a question concerning the amount of education necessary to get along in the world. The percentage in each group which answered "a diploma plus additional education or training" was fairly consistent from 1967 to 1969. (The analysis of this question is limited to the subjects who were interviewed during both follow-ups in order to detect changes over time). For the groups without diplomas the "diploma plus" answer ranged between 36 and 49 percent for both interviews. For the regular high school graduates the percentage giving this answer was considerably higher (71 and 85 percent). Subjects who earned a diploma in the experimental program experienced a considerable increase from 1967 to 1969 in the percentage who thought education beyond the diploma was necessary. In 1967 the group's percentage was close to those of the subjects without diploma, 54 percent. In 1969 it was in the range of regular high school graduates, 72 percent. Many of the subjects who had in 1967 considered the diploma to be sufficient in 1969 felt the need for more education or training. This finding agrees with other data that indicated attaining a diploma did not yield the returns the subjects seem to have anticipated.

ADDITIONAL EDUCATION AND CITIZENSHIP

To examine other possible effects the programs may have had, the subjects were queried on any training taken after the program, their use of the mass communications media, and their political awareness and citizenship behavior.

Training Taken After the Program

During the 1967 interviews the subjects were asked whether they had participated in any education or training program since they had been involved in the Penn State program or graduated from regular high school. The same question was asked during the 1969 interview except that it was rephrased to include only the time period from the previous interview. Table 36 presents the responses to their questions.

During both interview periods the regular high school graduates participated in more training than any of the other subjects. The other groups were quite similar during both interview periods. In 1967, 33 percent of the experimental subjects (program completers, program dropouts, and controls) and 73 percent of the regular high school graduates reported that they participated in some other training. The percentages were 20 percent and 41 percent, respectively, in 1969. The experimental programs did not appear to have increased the number of subjects

TABLE 36

Other Education Training Taken After the Programs

	Diploma Completers		Skill Completers		Controls		Program Dropouts[a]		High School Graduates[b]	
	1967	1969	1967	1969	1967	1969	1967	1969	1967	1969
	%	%	%	%	%	%	%	%	%	%
Took Training	31	22	48	24	33	19	34	17	73	41
Did Not	69	78	52	76	67	76	66	83	26	57
No Answer, Do Not Know	--	--	--	--	--	5	--	--	1	1
Number	51	46	25	25	66	62	80	65	70	68

	1967	1969
Chi Square	37.92	22.61
Degrees of Freedom	8	8
Probability	<.001	<.005

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[a] Results for the dropouts from the diploma and skill programs did not differ significantly.

[b] Results for the graduates from the general and vocational curricula did not differ significantly.

who chose to continue their education or to acquire further training.

Since the number who had participated in other programs was quite small in some groups, the discussion of the nature of these programs must be rather general. Slightly more subjects were found to have participated in full-time rather than part-time programs. Very few took correspondence courses. There were no significant differences between groups or between interview periods as to the format of the courses taken.

For both follow-up periods the subjects were found to have participated in many different types of training. These included college courses, on-the-job training, separate training programs run by the government, business training programs offered by business schools or colleges, and self-improvement courses. College courses tended to be taken mostly by the regular graduates, and other types of programs were evenly distributed among the groups during both interviews.

Among those who completed other programs, it was found that the courses they took averaged about six months or less in length. At the time of the 1967 and 1969 interviews, some of the subjects were still attending programs or had failed to complete those that they had started. The length of the uncompleted courses was greater than the completed ones, with a mean of over a year. The high school graduates took longer programs than the subjects of the other groups.

Media Usage

Questions were asked, during both the 1967 and 1969 follow-up interviews, about the subjects' use of the mass communication media--newspapers, magazines, and television. Comparisons were made among groups to see if differences in education may have produced differences in media usage. It seemed reasonable that if the experimental programs, especially the diploma program, stimulated more socially awareness, this would be reflected in the use of media to increase understanding of public events.

When asked if they read a newspaper on a regular basis (at least every other day), about two-thirds of all the subjects replied that they did. (Table 37) There were essentially no differences among the groups as to the types of newspapers, local or metropolitan, which they read.

TABLE 37

Readership of Newspapers by Subjects

Read Newspaper	Diploma Completers		Skill Completers		Controls		Program Dropouts[a]		High School Graduates[b]	
	1967	1969	1967	1969	1967	1969	1967	1969	1967	1969
	%	%	%	%	%	%	%	%	%	%
Yes, Local daily	51	56	60	40	54	50	52	37	64	68
Yes, Metropolitan daily	16	17	4	12	3	14	15	15	9	9
No	31	26	36	44	41	29	31	48	27	23
No answer, Do not know	2	--	--	4	2	6	1	--	--	--
Number	51	46	25	25	66	62	80	65	70	68

[a] Results for the dropouts from the diploma and skill programs did not differ significantly.

[b] Results for the graduates from the general and vocational curricula did not differ significantly.

When asked what parts of the newspaper they read, many replied that they read everything. During both interview periods more of the diploma completers and the regular graduates said that they read everything than did the others. When asked to name what columns they read regularly, almost none reported they read political columns. In fact, the greatest proportion of subjects in each group were found not to read any column regularly. Obviously those who claimed to read everything in the newspaper were exaggerating. When asked if they read editorials, a little over 10 percent of the subjects replied during both interviews that they read an editorial every day; but most stated that they did not. Due to the small number of subjects reporting, the differences among groups were insignificant. It appears that neither the experimental programs nor regular high school curricula did very much to increase social awareness, as it would be reflected through the reading of editorials and political columns.

Magazine readership and television watching also failed to indicate any program effects. About 60 percent of all the subjects during both interview periods read magazines regularly. Of these, however, very few (2 or 3 percent) read current events magazines such as Time or Newsweek. The regular high school graduates from the general curriculum accounted for six of the nine subjects in the 1969 interviews who read current events magazines. Again it appears that the programs did not increase or produce differences in political awareness among the groups as reflected in the magazines they read. Television watching also was extensive but almost exclusively for entertainment. Only 2 or 3 percent watched news or topical programs, even fewer watched educational television.

Few respondents used any of the media for purposes other than entertainment. The regular high school graduates were not significantly different from the other groups in their interest in politics or current events as reflected through their use of the media. It appears that it takes more than the traditional educational exposure to cause students, such as those who participated in this study, to use the mass media for purposes of personal education.

Political Awareness and Citizenship

Questions were asked about three aspects of political awareness and citizenship during the 1967 and 1969 follow-ups. These areas were voting behavior, knowledge of political figures and issues, and union membership participation.

Those subjects who were not yet twenty-one years old when interviewed were asked whether they intended to vote regularly. During the 1967 interview, over 80 percent replied that they planned to do so. By 1969, there were only a small number not yet twenty-one years old; however, among these, the control and program dropout groups had fewer reporting that they planned to vote regularly. Over 80 percent of the subjects in the other three groups replied that they planned to vote, while the percentages for both the control and program dropouts were in the forties.

At the time of the 1967 interview, only three of the regular high school subjects were twenty-one years old. Thus, there were no valid data for this group on their voting behavior. Even for the 1969 interview, the subjects who had become twenty-one had not had many opportunities to vote. For these reasons the regular high school graduates are not included in the discussion of actual voting behavior.

The experimental groups were quite similar in the proportion of twenty-one year old subjects who reported that they had voted at some time. Thirty-eight and 46 percent respectively of these subjects stated that they had voted prior to the 1967 and 1969 follow-up interviews. At the time of the 1967 interview, some of those who reported having voted did not claim to have done so during the most recent past election; however, for the 1969 interview almost all of the eligible subjects reported voting in the most recent election. There were no differences between the groups in their reported voting behavior. Fewer than half who were old enough to vote chose to exercise this right.

The subjects were also asked, during the 1967 interview, to guess who they thought the presidential candidates would be in the 1968 election. The results are presented in Table 38. (A reasonable guess was defined as a national political figure who was correctly identified with his political party.) Unexpectedly, dropouts from the diploma program differed quite significantly from the skill training dropouts. The diploma dropout group had the highest percentage of subjects giving reasonable guesses for both parties, while the percentage of the skill training dropouts was the lowest of all the groups. The reason for the large difference between these two groups could not be determined from the data. Except for the diploma dropouts, the regular high school graduates had the most reasonable guesses for both parties, but except for the program dropouts, there were no significant differences among the groups. The effects of the program on this measure of political awareness, were made ambiguous by the results for the program dropouts, but they do not indicate much influence.

In 1967 when the subjects were asked the year of the next presidential election fewer than half of the experimental subjects gave the correct answer. There were no differences among these groups. Eighty percent of the regular high school graduates knew the correct date. By 1969, the proportion of regular graduates remained essentially the same, while the percentage for the other subjects increased to 68 percent.

The final indication of political awareness concerned the identification of several prominent politicians. On these questions more of the regular high school graduates were consistently able to give the correct answers. In 1967, for example, 93 percent from this group knew the name of the Vice-President compared to 64 percent of the other subjects. In 1969 the figures were almost identical--regular graduates 90 percent, other subjects 59 percent. The number who were correct was lower but the difference about the same on the name of the state's governor. This question, when asked in 1967, was answered correctly by 64 percent of the regular graduates and 45 percent of the other subjects. In the 1969 interview all groups did poorly on the names of the state's senators, but here too the regular high school graduates were superior--38 percent were able to name at least one senator compared to 15

TABLE 38

Ability of Subject to Guess Plausible Presidential Candidates, 1967 Follow-Up

	Diploma Completers	Skill Completers	Controls	Diploma Dropouts	Skill Dropouts	High School Graduates[a]
	%	%	%	%	%	%
Reasonable guess, both parties	43	28	42	82	25	64
Reasonable guess, one party	31	32	23	4	46	23
Implausible guess	--	--	--	--	2	--
Do not know	26	40	33	13	26	11
No answer	--	--	2	--	2	1
Number	51	25	66	23	57	70
Chi Square				28.42		
Degrees of Freedom				4		
Probability				<.001		

[a] Results for the graduates from the general and vocational education curricula did not differ significantly.

percent of the other subjects. None of these comparisons revealed significant differences among the experimental groups.

The subject's opinions of the most important national and local problems were quite general, although they did show some political awareness. Nationally, the problems of race relations and Vietnam were cited most frequently. Taxes, poverty and unemployment were also commonly mentioned. The responses were usually given in broad, general terms which indicated a lack of specific knowledge about the conditions mentioned. The subjects reported local troubles but seldom cited any specifics. The experimental programs did not appear to affect perceptions of national or local issues.

Despite the high degree of union menbership in the labor market of this study, few subjects stated that they belonged to unions, 15 percent in 1967 and 23 percent in 1969. Almost none of the subjects held offices within their unions. Only three were committee members or elected officers at the time of the follow-up interviews. Given the relative youth of the subjects, the small number in leadership positions is not surprising. The subjects did not attend union meetings regularly. A little over 10 percent reported that they always attended meetings; more than 75 percent of the members replied that they did not attend meetings or went only sometimes. At the 1967 follow-up, the period since they attended their last meeting averaged about six months for all of the subjects. By 1969, the average period since their last meeting had increased to considerably more than a year. Neither the Penn State nor the regular high school programs appear to have stimulated active participation in labor unions.

When asked what they thought was the most important goal of unions, the subjects most frequently endorsed standing up for workers' rights. The second most frequently given goal was more pay. Trying to elect politicians who favor the working man was cited as the least important goal. These results were true for both follow-up interviews, and there were no significant differences among groups.

There was thus little evidence from any of the citizenship questions that the general education program produced the broader effects that are often claimed for it. The experimental diploma program made a major instructional effort in social studies. Of the twelve credit units earned by the students four and one-half were in social studies and included American Government, American History, and Problems of Democracy as well as World History and Economics. The instruction given in these subjects, however, was not reflected in the answers of the students to the questions on politics and voting. For most comparisons there were no significant differences among any of the dropout groups, and the differences that were found were in favor of the regular high school graduates.

In certain ways the results presented in this chapter are more discouraging than those found for employment experiences. More discouraging in the sense that these variables should have been more susceptible to the influence of the experimental programs, especially the diploma program which made direct efforts to influence political and social awareness and indirect efforts to enhance self-confidence and self-esteem. Although the evaluation of the experimental phase indicated some effect, none was evident during the follow-up period.

Since the diploma program largely reflected the general curriculum typically offered in high school, its inability to produce any persistent effects highlights the ineffectiveness of this kind of approach to education. The diploma program did make a special effort to respond to the needs and interests of its students. However, it had to retain enough similarity to the traditional general curriculum to satisfy the requirements of the school district that awarded the diploma and to include the courses and credit hours mandated by the state. The design of the study also required that the program not differ radically from the traditional general curriculum.

The failure to find any long-range effects from exposure to this type of education indicates that different approaches are needed. Some of the features that should be included in any new approaches are discussed in Chapter 5.

SUMMARY

In this chapter the effects of participation in the various programs on several variables not related to employment are examined. The subjects were asked questions concerning their overall evaluations of their participations. The majority of subjects in all groups, even those in the control group which received a minimal program, thought that their participation was worthwhile. Most of them also felt that they got what they wanted from their participation, said they would do the same thing again, and had no suggestions on how the programs could be improved. The skill training groups--both the completers and dropouts--had the lowest proportions who were positive about their participation. They were also most likely to suggest changes in the program, especially changes concerning teachers. The larger proportion of dissatisfied students from the skill training program tend to confirm the evaluation of this program that was presented in the interim report.

Although the experimental diploma program was seen more favorably by its students there was no evidence that successful completion produced detectable changes in self-esteem over the follow-up period. The Adjective Check List and open-ended questions were used to assess how the subjects felt about themselves and their position in life. There were few consistent differences among the subjects and those that did occur tended to show the regular high school graduates as having the most positive attitudes.

The questions on media usage and citizenship behavior showed a similar pattern. The subjects were asked about their use of mass media to determine if those who had a general education used the media for educational purposes or to keep informed of current events. Very few in any of the groups did so. Questions on knowledge of election dates and the names of prominent politicians showed the regular graduates to be better informed than the dropouts, but the students who completed the experimental diploma program did not differ from the other dropouts.

From the data this study was able to gather there was little indication that the broader education of the diploma program produced graduates who differed in predictable ways from the other members of the dropout population from which they were selected.

CHAPTER 5

SUMMARY AND IMPLICATIONS

This is a report on the post-program experiences of a group of high school dropouts who participated in two experimental programs. One program offered courses leading to a high school diploma, the other offered skill training in one of three occupational areas. These programs were conducted to test whether obtaining a diploma or skill training increased the employment opportunities of former dropouts. The students who took part in the programs, both those who completed them and those who did not, as well as three other comparable groups were followed up for thirty-three months to determine the effects of the programs on the employment experiences, goals, additional education, and citizenship of the subjects.

During the experimental phase of the study, the diploma program was much more successful when measured by retention rates, test results, and interviews. The first section of this chapter summarizes the major results and briefly discusses the attitudinal tone in the two programs that appeared to be responsible for the differences in these results.

Although the diploma program was more successful and those who completed it obtained diplomas, there was no evidence during the follow-up period that they realized any advantages from their participation. Nor were there any advantages associated with completing the skill program or even regular high school. Two of the comparison groups were composed of regular high school graduates from the general and vocational curricula who were matched with the experimental subjects. Few of the experiences of these groups differed in significant ways from those of the subjects who withdrew from the experimental programs or from those of other high school dropouts who received no additional education or training. The results for all these groups are summarized in the second section of the chapter.

The third section examines the basic assumption tested by these experimental programs--that removing the barrier to employment represented by the absence of a high school diploma would increase the employment opportunities available to the subjects. There was no evidence either for the former dropouts who obtained a diploma or even for the regular high school graduates that the diploma had this effect. It was not the absence of the diploma or inadequacies in the preparation they received that limited the employment of these subjects as much as the minimal opportunities available to young people with their backgrounds in the labor market. Structural limitations in our society, much more than credentials or training, influenced the employment available to the young people who participated in this study. The nature of these limitations, in the school and in the labor market, is discussed in the section, "A Perspective on Education."

The final section makes some suggestions as to what retraining programs can reasonably hope to achieve, given the limited effects of education on occupational mobility. The recommendation is made that training not be conducted unless each trainee can be guaranteed placement in a job which he considers acceptable. It is also recommended that since none of the extra benefits of the broader education approach was evident in this study, retraining programs should focus on enhancing the job skills of their participants and forego the rhetoric of rehabilitation.

THE EXPERIMENTAL PROGRAMS

Basic Assumptions and Approaches

In developing the experimental programs it was recognized, on the one hand, that the diploma and skill training programs had to be typical of their type so that the results of the research could have realistic application. On the other hand, it was also recognized that since the programs being developed were for students who had dropped out of school, some changes would have to be made in existing philosophy, organization, and methodology or too many of the factors that operated to cause students to drop out the first time would remain and cause them to leave the experimental programs. The goal was to have at least fifty students in each program at the conclusion of the instructional period.

The basic assumption was made that students and teachers would not derive satisfaction from a typical instructional situation and, therefore, would not remain a part of it unless positive interpersonal relationships were developed. The term "interpersonal relationships" as used here is meant to represent the cumulative effects of all human interaction within any particular situation. In its report to the President in November, 1966, the National Advisory Council on the Education of Disadvantaged Children found teacher-pupil relationships the single most significant factor in determining the success of summer programs for disadvantaged students (Wilson, 1966).

During the development of the high school diploma program, efforts were made to structure each instructional situation to create opportunities for the development of positive interactions. There were many links in the chain of interaction that began with the University and relationships among members of the project staff. These included the project staff's relationships with the administrators of the program; the administrators' relationships with the teachers; the teachers' relationships with each other; the teachers' relationships with the students; and, finally, the students' relationships with each other.

Considering what is known concerning school rejection by the culturally deprived, it seems safe to assume that any failure in this vital chain of relationships could have resulted in the creation of conditions conducive to school rejection. Similar efforts were made in the skill training program but, because of the inadequacies of the administrator, these were not successful.

In planning the programs it was recognized that young persons from a poverty culture commonly have a weakness in verbal ability. Their environment seems to produce a different approach to learning. Verbal abstractions have little relevance and communication takes place through a greater variety of physical means. There is a need to manipulate objects, tools, and equipment. Sensory learning--seeing, hearing, feeling, tasting--is more compatible to them than learning through vicarious verbal experiences.

Unfortunately, the culturally disadvantaged student is continually exposed to school activities that require the use and development of his lesser abilities. He is required to spend most of the time doing the things that he can do least well and is required to view problems and reach solutions through means which are least compatible to him. Under these conditions it is not difficult to understand why failure is common and why negative attitudes develop. It also is easy to understand why a teacher faced with certain goals of student performance set by his superiors and faced with students who constantly fail in their attempts to achieve these goals can become most negative toward the failing students. The reaction of both teacher and students to their mutual frustration represents the nadir of student-teacher relationships. These experiences produce the negative attitudes and learning deficiencies which eventually result in school withdrawal.

It was anticipated that subjects recruited for this study would bring these problems back to school with them. The first order of priority was thus to overcome these negative attitudes. Once the student no longer regarded the teacher as an enemy, the process of attempting to overcome educational deficiencies could begin.

The interview and test results indicated that the expectations on which the programs were based were well-founded. The subjects were predominantly from poverty environments, in which there was considerable family instability, with approximately one-third of the sample living on welfare. While most of the subjects reported they had had academic difficulties in school, the major reasons for leaving school, besides pregnancies, involved discipline infractions.

Test results confirmed the interviews. The achievement tests showed the subjects' average performance to be at an elementary school or junior high school level--considerably below that of the average high school student. They performed at this level even though their mean IQs were well within normal limits. This discrepancy between ability and achievement indicates the degree to which the schools had failed to teach and these students had failed to learn in the traditional setting.

Part of the reason for these failures rests in the verbal demands of the schools interacting with the verbal deficiency of the students. While both the mean verbal and mean nonverbal IQs were within the normal range, the nonverbal IQ was significantly higher. This finding confirmed another expectation as to the characteristics of the subjects. Because of their verbal deficiencies, the emphasis on traditional lecture-textbook type courses was to be minimized and methods that stimulated student involvement were to be stressed.

Teaching methods that involved student participation served another purpose: they provided the teachers with opportunities to demonstrate their interest in and concern for the students. The successful teachers were able to communicate this interest and concern.

Not All Teachers Were Effective

The critical variables that separated the successful from the unsuccessful teachers were primarily attitudinal. Teachers who worked effectively with the students cared about them as individuals; they had insight into the personal characteristics and motivations of the students and were aware of the difficulties many of them were trying to overcome. This awareness caused the successful teachers to put extra effort into attempting to communicate with the students. The students responded to this obvious involvement on the part of the teachers. Instead of avoiding the learning situation--a response that they had learned in previous school settings--they responded to the teacher and found they could, indeed, learn.

The successful teachers designed their courses so that the students could master the subject matter, and they understood that the students' initial belligerence was a defense against expected frustration and rejection. Consequently, the students' latent hostility did not evoke counter-hostility on the part of the teacher. The long cycle of mutual expectations of failure and rejection on the part of both teachers and students was finally broken. In other school settings these expectations had stimulated the kinds of behavior that confirmed the expectations. The successful teachers were able to break the cycle by not acting toward the students as other teachers had in the past. They accepted and reacted to each student as an individual rather than as a "dummy" or "trouble maker."

In general the unsuccessful teachers were not able to accept the students as individuals; they responded to the stereotype of the dropout rather than to the separate students they taught. They ascribed the dropouts' difficulties to character defects which had to be overcome by personal diligence. Since these teachers believed the problem lay with the nature of the student, it was the students' responsibility to make any adjustments necessary for them to benefit from the program. But basically these teachers had little faith in the ability of the dropouts to make such adjustments. They believed that the dropouts' "limited natural ability" and "lack of initiative" prevented them from doing so.

Attitudes such as these naturally reduced the effectiveness of the teachers who held them. These teachers complained of obtaining little response from the students; the successful teachers, on the other hand, remarked about the enthusiasm of their students. The poorest teachers were skeptical of the worth of the program; the good teachers saw it as a "last chance" for students whom the regular school had failed to serve. The poorer teachers taught these students in much the same way they taught their regular classes and learned little from their participation in the program. The better teachers, however, constantly attempted to find new ways to reach the students and found that, in turn, their regular teaching was affected.

In short, the successful teachers, so rated both by their supervisors and on the basis of their taped interviews, were concerned about the students and interested in the program. Their concern was communicated to the students, who responded by actively cooperating with the teachers. The learning experience was no longer a conflict with the teachers on one side and the students on the other; instead, both were partners in a mutual learning venture.

The supportive atmosphere and the concern of the teachers were not established to the same degree in both programs. All data indicate that the diploma program was the more successful. The retention rate was more than double (52 percent in the diploma program to 23 percent in the skill program), and the test results showed the diploma graduates improved their reading and arithmetic skills while the skill training graduates did not. The measures of self-esteem showed the same pattern, with some evidence that the self-esteem of the skill training graduates actually decreased during the program.

Interviews with the graduates also confirmed the greater success of the diploma program. The diploma graduates were more convinced of the future usefulness of the education they had received. When the subjects were asked what it was they liked about the program, one-fourth of the diploma graduates mentioned the general tone and administration; none of the skill training graduates volunteered this response.

Experiences in the diploma program, the most important of which was successfully completing it, appeared to have increased the self-confidence of the diploma graduates. A series of questions about future intentions and expectations revealed that those subjects who completed the diploma program were more convinced than any of the other subjects of their ability to control their own future. These kinds of changes, while difficult to substantiate, were among the goals of the experimental program.

THE FOLLOW-UP RESULTS

The dropouts who participated in the experimental programs, both those who completed them and those who withdrew, a control group of other dropouts who received no training, and a matched group of regular high school graduates from the general and vocational curricula were followed-up for thirty-three months after the end of the experimental programs. Two rounds of follow-up interviews were conducted at approximately sixteen month intervals. During the first round 64 percent of the original subjects were interviewed and during the second round 59 percent. For the most part, few significant differences were found among the subjects. The students who completed the diploma program thought that they had benefited from it but there was little other evidence that showed they did. They were not employed more, nor did they earn more money, nor did they express more satisfaction with their jobs. They did not appear to have set higher vocational goals or to be more confident of their ability to reach them. Nor were they more politically aware or more likely to use the mass media for educational purposes. The regular high school graduates did not differ from the experimental subjects on most of these indices either. This section summarizes the major findings in each of the areas covered in the follow-up interviews.

Subjects' Evaluations of the Programs

The subjects who had been in the diploma program reported quite positive evaluations of their education. Almost all stated that their participation was worthwhile. They cited personal rather than vocational improvement as the primary benefit they received. Even among those who had withdrawn from the experimental programs, the diploma dropouts were more inclined to state that the program was worthwhile than were the skill dropouts. Over 90 percent of the subjects who completed the diploma program stated that they had gotten what they had wanted, and a diploma was mentioned most frequently as the thing that they had wanted. When asked if they would do the same thing over again, the subjects in the diploma group responded overwhelmingly that they would.

The skill group subjects were more critical of their program. In comparison to the diploma group, fewer felt that their program had been worthwhile. Less than half of the program completers reported any improvement in their vocational skills. Both completers and dropouts tended to be critical of their teachers, probably reflecting the negative attitudes that many of the instructors in the skill program held of their students. Many of these subjects also reported that problems with the program had prevented them from getting what they wanted from it. Finally, more subjects in the skill group than in the diploma group stated that they would not do the same thing over again if they could return to the time when they had begun the program.

The control subjects and program dropouts obtained few objective benefits from their participation but were reluctant to say negative things about programs that were supposed to have helped them. Many in these groups reported that they felt the programs had been worthwhile; those who replied that they did not get out of the programs what they had wanted tended to blame themselves rather than the program. Among those controls and program dropouts who reported a desire to do things differently if they could start again, most stated that they would like to complete the program or high school.

The two groups of regular high school graduates, from the general and vocational curricula, differed in what they perceived the benefits of their education to be. As would be expected, the graduates of the general curriculum tended to cite personal improvement as the thing which made their program worthwhile, whereas the vocational program graduates were more likely to mention vocational skills. When asked if they had gotten what they had wanted from high school, the general curriculum graduates usually replied positively that they had obtained an education; the vocational graduates tended to stress employment.

The satisfaction of obtaining a diploma was not as frequently mentioned by the regular graduates as it was by the experimental subjects. The regular graduates did not seem to place as high a value on acquiring a diploma or completing their program as did the dropouts. These graduates most likely assumed throughout high school that they would succeed in these efforts. Having been labeled "dropouts" appears to have enhanced the value of the diploma among the experimental subjects. Furthermore, the regular graduates were more inclined than the experimental subjects to express dissatisfaction with their schooling. The question of whether they would do the same thing over if they could start again was also answered differently by the regular graduates than by the experimental subjects. The latter responded primarily in terms of whether or not they would complete their programs, the former tended to direct their responses toward what they would do differently within their program. Many of the regular graduates expressed a desire to work harder or to take different courses if they could begin school again.

Employment Experiences

During the thirty-three month follow-up period the labor market in the area where the study was conducted was favorable for the job seeker. The amount of unemployment among the subjects was, therefore, quite surprising. It varied across groups for the two follow-up interviews from a low of 17 percent to a high of 39 percent. Even though the rate of unemployment is traditionally high among the young, these rates are still unusual. A survey of unemployment in the poverty areas of six large cities between July 1968 and June 1969 found rates approaching these only among the youngest job seekers, those 16 to 19 years of age (Bureau of Labor Statistics, 1969). Since the subjects in this study were slightly older and better educated, somewhat lower rates would be expected. However, the point most pertinent to the study is that possessing a diploma was not associated with increased employment. In fact, the multiple regression analysis indicated that when the effects of sex and race were held constant, subjects in the control group were employed more than the former dropouts who acquired diplomas through the experimental program.

For the jobs the diploma program completers obtained they reported more relationship between the things they had studied and the requirements of their jobs than would be expected, considering the academic nature of the program. Many felt that their program influenced the types of jobs that they desired. Since these subjects were not highly selective in seeking jobs and since the nature of the instruction in their program was not directed toward specific jobs, these answers were somewhat surprising.

The diploma group also differed from the other experimental groups in the proportion of subjects who reported that they were asked if they had diplomas when they applied for jobs. The proportions who reported that they had been asked this question was about the same among those who completed the diploma program as it was among the regular high school graduates. The other dropout groups had much smaller proportions of subjects who recalled questions about diplomas as part of the screening for first jobs after the programs; however, by 1969 the differences among groups had diminished. Although subjects with diplomas were more likely to obtain jobs which they reported required diplomas, they did not enjoy superior employment experiences as measured by income, job satisfaction, employment stability, and socioeconomic status. These results indicate that overcoming the diploma barrier yielded few rewards to those subjects who were able to do so, and raise questions as to the validity of the diploma as a hiring standard.

The one consistent result found to be associated with obtaining a diploma was a lower degree of job satisfaction. This pattern was most clear for the first follow-up period and for the subjects who obtained their diplomas through the experimental program. Multiple regression analyses were conducted on the average satisfaction ratings of seven job areas for all jobs held from the end of the programs to the 1967 interviews and for all jobs held from the 1967 to the 1969 interviews. In 1967 the regression equations indicated that in twenty of twenty-one comparisons the subjects who had been awarded diplomas were less satisfied with their jobs than the members of the control group were with theirs. Eight of the twenty comparisons were statistically significant and six of these eight were for the subjects who completed the diploma program. The results for the 1969 follow-up were not as clear. In 1969 only eleven of the twenty-one comparisons indicated less satisfaction for the diploma holders and none of these were statistically significant. Here again, however, six of the seven statistics for the diploma completers showed them to be less satisfied.

The most direct explanation of these results is that attaining a diploma caused an increase in expectations as to the kind and quality of jobs that would be available to one in the labor market. Actual experiences in the labor market, however, did not fulfill these expectations. The jobs the diploma holders obtained did not differ on most objective indices from those held by the subjects in the control group. Nevertheless, the diploma holders, tended to be more dissatisfied with their jobs. And the subjects who were most clearly dissatisfied were the former dropouts who completed the experimental program to earn their diplomas.

There are some additional results that suggest acquiring a diploma led to increased expectations which were subsequently disappointed. In 1967 when the subjects who had completed the diploma program were asked how much education they felt a person needed to get along, about half of them stated a high school diploma or less. This was about the same proportion as in the other dropout groups. Among the regular high school graduates, however, approximately three-fourths answered that more than a high school diploma was necessary. During the 1969 interviews the proportions in all groups except the diploma completers were virtually the same as in 1967. Among the diploma completers, however, the proportion who felt more than a high school diploma was necessary had increased to almost three-fourths. Approximately one-fourth of the subjects who in 1967 had felt a diploma was sufficient by 1969 thought that more education was necessary.

Despite these indications of unfulfilled occupational expectations, the subjective evaluations of the program itself that were discussed above were quite positive for the diploma completers. Virtually all of them thought that their participation had been a worthwhile experience and they had gotten what they wanted from the program. Apparently their dissatisfaction with the jobs they were able to get did not affect their general attitudes toward the program.

The skill training group had the largest proportion of subjects who were selective as to the types of jobs they sought. Many in this group stated that they looked for a specific type of job, especially when seeking their first jobs following the program. The job-related nature of their instruction apparently caused this selectivity. However, few of the skill group subjects reported such direct effects. Even fewer reported much use on the job of the things which they had studied, mainly because they could not obtain jobs which made use of the skills they had been taught. To the degree that the advantages of teaching job-specific skills in a retraining program are dependent on the students obtaining jobs that require these skills, these advantages were not realized by the skill group subjects over the thirty-three months covered by the follow-up interviews.

The referrals of family and friends were the sources most frequently used to obtain jobs after leaving the educational programs. By 1969, however, all of the groups, except those who completed the skill program, were less dependent on these sources. A large proportion of skill subjects had been contacted by employers for their most recent jobs in 1969. This seemed to have been due to the number who obtained jobs in the various programs conducted by the local community action agency. These were mainly social service jobs which had fairly high socioeconomic indices, however, they were not as hard to obtain as most other jobs with comparable indices. Furthermore, they paid rather low wages. For each job covered in the follow-up interviews, the skill group completers had the lowest means for starting and leaving wages. As a result, the ratings of job satisfaction showed the skill group to be least satisfied with their pay.

The control group and program dropouts showed practically no effects from their limited participation. If anything, it appears that their earlier entry into the labor market was to their advantage. It has already been mentioned that the control group was employed more than the diploma completers. Although the overall intergroup comparison did not yield significant differences in wages, the control group and the program dropouts did have the highest rates. The multiple regression analysis also indicated that when other variables were held constant the few significant associations between program classification and earnings were in favor of these groups.

The failure to find better results for the subjects who completed the experimental programs should not necessarily be attributed to inadequacies of these programs since the regular high school graduates did not demonstrate any advantages in their employment experiences when compared to the other subjects. The data for the graduates on earnings, socioeconomic status of jobs, job tenure and job satisfaction were not significantly different than the data for other groups. In fact, on all of these indices one or more of the experimental groups had better results than the graduates. It is clear that over the follow-up period of this study there were no employment advantages associated with the possession of a high school diploma.

Another finding for the regular graduates that paralleled results found for the experimental subjects concerned the usefulness of their education. There were no differences between the graduates of the general and vocational curricula in the proportion who reported they used in their jobs the things they had studied. Just as few of the skill completers found jobs that required the use of the skills they had studied, so did few of the vocational graduates. And just as the diploma completers rated their academic instruction as useful in their work, so did the general graduates.

A lack of vocational planning was common among many of the subjects. Each time they were asked about future plans or job expectations, approximately one-quarter were unable to answer. They did not seem to regard their work careers as a sequence of events that they could possibly anticipate and plan. Most tended to see jobs as things that happened to them and not as events they might control.

This attitude was also reflected in responses to measures of self-evaluation which are discussed next.

Program Effects on Attitudes, Education, and Citizenship

The evaluation of the experimental phase of the study indicated that the subjects who had completed the diploma program experienced an increase in self-esteem and seemed to have increased confidence in their ability to control the events in their lives. These changes did not persist into the follow-up period. Responses to the Adjective Check List, a standardized measure of self-perceptions, and to several open-ended interview questions yielded few consistent differences among the groups and none that appeared to be the result of experiences in the various programs.

A factor analysis was performed on the 24 scale scores derived from the Adjective Check List. Two highly consistent patterns were found for each administration of this measure. The first pattern reflected the natural tendency to perceive oneself as possessing those characteristics that are desirable in our society. The second pattern seemed to reflect feelings of dependency and powerlessness. Such feelings have been suggested as a basic characteristic of poor people (see, Irelan, 1966) who often are unable to influence the major events in their lives. In this analysis there was no evidence of any significant differences among the groups. The powerlessness pattern was as clear among the regular high school graduates as it was among the other subjects.

The examination of program effects on "additional education" showed no differences between the experimental groups, but more of the regular graduates did continue their education. Use of the mass communications media was limited almost exclusively to entertainment purposes by all of the subjects in this study. Essentially none of the subjects demonstrated any effort to improve his political or social awareness through newspapers, magazines, or television. The experimental programs were likewise found to be ineffective in altering the subjects' citizenship behavior as reflected in voting, union activities, or knowledge of important political figures and events.

The regular high school graduates differed from the experimental subjects with respect to their knowledge of political matters. They were better able to suggest possible presidential candidates for the next election, to give the correct date for the election, and to name such prominent political figures as the vice president, the state governor, and senators. It should be noted, however, that the high school graduates did not demonstrate through their use of mass media any greater effort to inform themselves on political affairs.

A PERSPECTIVE ON EDUCATION

The dropout program conducted and evaluated as the focus of this research were typical of many of the educational efforts conducted during the 1960's as part of the poverty program. Since the former dropouts who received a diploma or skill training realized no measurable occupational benefits from their participation--nor did the regular high school graduates from their schooling--it is appropriate to examine education as a method of overcoming the problems of young people from disadvantaged circumstances. And since special programs can, at best, serve only a small proportion of the population, the role of the public schools, in general, as a vehicle for social mobility is examined. The first topic discussed is the conflict in the basic functions of the schools: the conflict between what can be called their developmental function--to assist each individual to maximize his individual potential--and their selective and allocative function--to identify and prepare youngsters for different occupational roles. Since our nation is essentially middle-class, its institutions reflect its dominant values. Young people with different values and life styles have difficulty adjusting to the requirements of the public schools. During the 1960's the degree to which these young people were failing to learn became part of the national consciousness, largely as a result of the writings of several critics of education whose books received wide attention. The main points of these critics are summarized and evaluated to identify ways in which public education could be made more appropriate for all children, including the children of the poor. Even if such changes could be accomplished, however, education may still not significantly increase the opportunities open to the poor. Some of the reasons are discussed.

Schools Reflect Society

There can be little question that the groups in a community that have power and influence use them to further what they perceive to be the best interest of themselves and their community. Our society puts a heavy emphasis on competition and individual achievement. The individuals who succeed in this type of society--and thus occupy positions of power--generally believe that society has served them well and that it can serve others who are willing to put forth the effort to succeed. School boards generally are heavily represented with such individuals (Charters, 1953). Many school board members have achieved their position through superior academic ability which enabled them to obtain an advanced education. They naturally feel that a route that was appropriate for them is appropriate for others. And for their own children, it usually is.

There are, however, many youngsters for whom the route of academic preparation leading to college attendance is not open.

These students learn early in their school careers that they cannot perform as well academically as some of their classmates. The academic aspects of school become a long succession of boring and frustrating activities that result in unfavorable comparisons between themselves and their more competent classmates. When they reach secondary school, they are typically tracked into the general curriculum that offers a diluted version of the college preparatory curriculum--diluted to make it easier for the less able students. Although this track is less demanding, it retains most of the features that bore and frustrate students who are not academically inclined.

Peter Schrag in his essay "Growing Up on Mechanic Street" has described eloquently the condition of these students:

> They sit in rows of five . . . in the classroom, existing from bell to bell, regurgitating answers, waiting for the next relief. The mindless lessons, the memory and boredom, and the stultifying order of cafeterias and study halls--no talking, sit straight, get a pass--these things need not be described again. From bell to bell: English, mathematics, history, science--and, for some, release to the more purposeful and engaging activities of the shop: auto mechanics, data processing, welding, wiring, carpentry, and all the rest--some relevant, some obsolete, but all direct. There is an integrity, even joy, in material behavior--a sharp tool, an engine repaired, a solid joint--that the artificial world of the conventional academic course rarely allows.
>
> The instrument of oppression is the book. It is still the embodiment of the Great Mystery; learn to understand its secrets and great things will follow. Submit to your instinctive and natural boredom (lacking either the skills to play the game or the security to revolt), and we will use it [the book] to persuade you of your benighted incompetence: 'I didn't want to write a term paper, but the teacher said it would be good if I did; when I handed it in she made fun of it; so I quit school.'
>
> For the children of Mechanic Street--as for all others--the classroom has rarely been more than a marginal place. Except for minimal literacy and a few tricks picked up in a home-ec course, the girl who marries at eighteen was educated at home, though she may well have used the school to find her husband. Except for the certification that schools bestow on good behavior and acceptable habits, the boy who takes

> a job immediately after graduation (or who, with a fifth of his peers, never graduates at all) takes little from his school, except perhaps a vaguely unexpressible sense of defeat.
>
> It is possible to leave Mechanic Street through school achievement--to community and state colleges, to technical schools, to better jobs--yet it is hardly universal. Fewer than half actually go. What kids do in school tends, as always, to be predetermined. The honors class is filled with the children of professionals, kids whose parents have gone to college. The general course (meaning the dead end) and the vocational track are composed of the sons and daughters of bluecollar workers. The more 'opportunity,' the more justified the destiny of those who are tagged for failure. The world accepts the legitimacy of their position. And so do they. Their tragedy and the accompanying threat lie precisely in their acceptance of the low esteem in which school, society, and often their parents regard them. . . . (1970, pp. 38, 41, 49-50.)

The school experience described by Schrag represents an essential aspect of the selective and allocative function of the public schools. The schools must not only identify those individuals who are to assume the less satisfying and less rewarding jobs in society, they must also convince the people so identified that these jobs are the most appropriate ones for them. According to Talcott Parsons' analysis (1959), academic performance or school "achievement" is the criterion by which this selective and persuasion process is carried out. Those who can perform academically are identified and encouraged to continue their education; those who cannot meet the schools' standards become convinced that they as individuals are less valuable and set their occupational goals accordingly.

Parsons described the basis of this selection in this manner:

> Probably the most fundamental condition underlying this process is the sharing of common values by the two adult agencies involved--the family and the school. In this case the core is the shared valuation of achievement. It includes, above all, recognition that it is fair to give differential rewards for different levels of achievement, so long as there has been fair access to opportunity, and fair that these rewards lead on to higher-order opportunities for the successful.
>
> . . . the valuation of achievement and its sharing by family and school not only provides the appropriate values

> for internalization by individuals, but also performs a crucial integrative function for the system. Differentiation of the [school] class along the achievement axis is inevitably a source of strain, because it confers higher rewards and privileges on one contingent than on another in the same system. This common valuation helps make possible the acceptance of the crucial differentiation, especially by the losers in the competition. (1959, pp. 309-311)

This socialization process results in what Schrag refers to as "a vaguely unexpressible sense of defeat" and what he means when he says "the more 'opportunity' the more justified the destiny of those who are tagged for failure. The world accepts the legitimacy of their position. And so do they." It should not be inferred that educators deliberately set out to instill feelings of inferiority in their less able students. Nor is it likely that many are aware of their role in perpetuating the stratification of society. But, by instilling a sense of defeat the schools make legitimate the differential distribution of rewards in society. The losers in the competition blame themselves for their position. They say to themselves that if they had studied harder, they too might have been able to get better jobs.

This is, of course, a false explanation. The rules of the game are stacked against them from the start, especially the rule that defines education as an abstract, symbolic activity focused on "the Great Mystery"--the book. The book is the sine qua non of academic instruction, but it is probably the chief barrier to learning for the future dropout. An analysis of the Project Talent data (Combs and Cooley, 1968), that compared dropouts with graduates who did not continue their education, showed the largest differences in measured ability were on verbal tests. Reading is a complex, symbolic activity. Unless the material being read has some inherent interest or utilitarian value, it is difficult even for skilled readers to keep their attention focused. How much more difficult it is for readers with limited skills to concentrate on material as inherently uninteresting and useless as the average textbook.

To overcome these barriers to learning it is obvious that new styles of education are necessary. Before discussing these new styles, it will be helpful to review some of the recent criticisms of education that have focused the nation's attention on the failures of its schools.

Recent Criticisms of Education

In the last half of the 1960's, about the same time the poverty program was at its peak of activity, a number of books were published that described the collapse of education in urban areas, especially the education of blacks from poverty environments. Foremost among these were Jonathon Kozol's Death At An Early Age, Herbert Kohl's 36 Children, and James Herndon's, The Way It Spozed to Be. Each of these books described the mindless oppression of the school in which the author taught--slum schools with virtually all black students--the apathy and belligerence of the students, the inadequate facilities, the inappropriate curriculum, and, always, the school administrators, about whom the kindest description would be that they were ignorant. One would not want to conclude that they were evil and vicious people.

Despite the depiction of these stultifying conditions, each of the books has grounds for hope. Each describes how the students began to respond when the authors disregarded school policy and began to treat their students humanely, and to find ways to relate to their needs and interests. The impact of these books, together with the influence of John Holt's How Children Fail, and the growing awareness of the English success with "open" classrooms [1] led to a belief among many critics of education that if the institutional rigidities inherent in public education could be overcome learning would be a mutually exciting interaction between teachers and students.

But would it? Schools can and should be changed to remove the oppressive restrictions that alienate so many students, but loosening or indeed removing rules will not be sufficient. Alternatives must be found so that education is not measured by hours spent in classrooms--hours that are boring, meaningless, and antithetical to the interests and learning styles of students. These changes should naturally begin in the elementary grades so that an antipathy to school never develops. The experience of many open classrooms (Silberman, 1970; Weber, 1971) indicates that school can be an exciting and interesting place, but it would be a mistake to assume that learning necessarily must be exciting or joyful and to achieve this all that is required is to respond to the interests of youngsters. To do so would be to repeat the excesses of the initial attempts to apply Dewey's concepts of progressive education.

While there is sometimes excitement or even joy in a newly acquired skill, an unexpected insight, or exposure to a new perspective, much of learning also requires hours in which new skills are practiced and perfected and new insights become part of one's basic concepts. John Goodlad reporting on observations in 260 kindergarten through third grade classrooms has stated:

> Only occasionally did we encounter a classroom aura of excitement, anticipation, and spontaneity; when we did, it was almost invariably in a kindergarten

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[1] Central Advisory Council for Education, Children and Their Primary Schools, London: Her Majesty's Stationary Office, 1967. Usually referred to as the Plowden Report.

> class. This is not to say that classroom inhabitants were uninvolved but rather to suggest that it may be erroneous to assume that teaching and learning in the schools, more than other human enterprises, are characterized by excitement and enthusiasm. (1969, p. 60)

Jonathon Kozol, one of the most vehement critics of typical school practices, has expressed the same idea more strongly:

> In the face of many intelligent and respected statements on the subject of 'spontaneous' and 'estatic' education, the simple truth is that you do not learn calculus, biochemistry, physics, Latin grammar, mathematical logic, Constitutional law, brain surgery, or hydraulic engineering in the same organic fashion that you learn to walk and talk and breathe and make love. Months and years of long, involved, and--let us be quite honest--sometimes nonutopian labor in the acquisition of a single unit of complex and intricate knowledge go into the expertise that makes for power in this nation. The poor and black cannot survive the technological nightmare of the next ten years if they do not have this expertise. (1972, p. 52)

And Mario Fantini writing from an entirely different perspective, that of Dean of a School of Education, makes the same point in a review of James Herndon's, How To Survive In Your Native Land:

> The hard truth is that to survive in our native land, with its complicated technology--as worker, citizen, parent, consumer, or self-developing individual--we all need preparation. Comfort, even dignity, of teachers and pupils in classrooms, important though such qualities are, will not be enough to offer this preparation to children who are not automatically rewarded by birth or by change. The public school is the only institution with the potential for such a grand design. (1972, p. 63)

Career Education: A Possible Model

If education is not joy, and if it does involve the acquisition of the skills necessary for survival, what model can it follow? The model that is proposed here attempts to achieve a compromise between the two main functions of the school that are usually in conflict. It does so, not by recommending that the schools renounce one or the other. As long as these functions must be performed, such suggestions are irrelevant. Despite the excitement caused by Illich's (1971) proposals to "de-school" society, the schools are going to continue. As Kozol and Fantini both state, the school is the only institution that can provide the preparation that is needed in our society. If schools are to be changed, the innovations must incorporate the functions that our society requires of its schools. What is needed is to find a way in which the selective and allocative function can be used to further individual development. Selection and allocation could be carried out not by convincing the majority of children that they are inferior and must limit their aspirations, but rather by helping them to develop positive career plans that would increase the options open to them. The model for such an approach is career education.

Career education is the approach being promoted this year, 1972, as the panacea for the ills of education, and--since education is usually cited as the ultimate solution to all problems--eventually for the ills of society. If experiences with past panaceas are any guide, a few school districts will adopt career education and proclaim it an outstanding success, a few others will try it and say it did not work, some others will add a course in career education to their traditional offerings, and most districts will not be affected at all. In a year or so interest will have faded and conditions will be right for a new panacea to burst forth on the scene.

If career education is to avoid a similar fate, it must be realized that it is not another course or curriculum that can be fitted into the traditional schedule. It is, instead, an approach, or way of thinking, about education that attempts to give meaning to school activities by replacing the artificiality of the subject centered approach with topics and problems of interest to the students. Occupational exploration would provide a theme and structure to these activities. The goals of this exploration, however, would not be to teach the specific skills of occupations. There would be much broader goals of examining the functions that various occupations carry out in society and how they functions are related to basic human needs; the ways in which these functions have been performed throughout history; the relationships among societal needs and the resulting interdependence of occupations; the skills required, typical activities, and working conditions of representative occupations, and so on. These learning objectives would not be subjects to be taught but would arise from the context of occupationally relevant projects and activities. While working on these projects the students would also acquire skills of communication--writing, speaking, and listening--problem identification, information seeking, decision-making, planning, scheduling, conflict resolution, etc.

The nature of instruction required for this style of education differs radically from the self-contained classroom which is focused on the teacher. The basic changes necessary for such a shift are individualized instruction and flexible grouping and scheduling. If teachers are to be able to function effectively under such a style, there must also be changes in the way they are prepared. Each of these topics is discussed below.

Individualized Instruction: Individualized instruction does not mean that each student is to be individually tutored. It does mean that necessary skills will be learned as they are needed and at the level of development of the student. It does mean that a significant portion of the content studied will be largely self-selected by the student. It does mean that the rate of movement through an activity, or from activity to activity, will be one that is comfortable for the student. Individualization of instruction seeks to protect the identity and integrity of each student by avoiding the compromising experiences of being required to participate in meaningless activities, or of having to keep up with a group that is moving faster than is comfortable, or of being expected to learn highly developed skills when their antecedents, less highly developed skills, have yet to be mastered. Individualization is particularly important for the student from poverty environments. If the principles and technology of individualization were thoroughly implemented from the time these children first entered school, it might be that much of the negativism that they develop toward a school and society could be avoided.

When instruction is individualized, the teacher plays a difference role from the one he has played in traditional programs. Gone is the concept of the teacher as lecturer, as a talking book; gone is the concept of the teacher as judge, as disciplinarian. The teacher no longer makes all the plans and all the decisions. To refuse students decision-making power or choice is to tell them not to become involved. Deprivation of decision-making power adds to the very apathy and discontent that education seeks to overcome.

The teacher in an individualized program is primarily responsible for creating an environment full of rich and stimulating opportunities to learn. Such opportunities may include provisions for traveling to visit points of interest, to observe an event or a process, to collect and record information, to come in direct contact with famous or influential individuals or groups, or to use special facilities. Equipment of many types also functions as a part of the environment and would include: all the basic tools and equipment associated with the occupations being studied, as well as a variety of communications aids--typewriters, tape recorders, phonographs, filmstrip viewers, projectors, television equipment, duplicating machines--and resource materials, even books.

It must be emphasized that a program cannot be considered individualized unless much of the planning is shared by the teacher and students. Planning will be done with an individual student when only he is involved. Group planning will also take place. It has been observed that disadvantaged students often know little about planning so that learning to plan may become a very significant activity. Planning not only involves planning activities but also developing codes of behavior and other social, interpersonal concerns. Throughout his activities, the teacher of an individualized program must be expert at questioning. He must know how to draw out his students' thinking and through his questions involve them so deeply in an idea that they, themselves, will begin to ask questions. Until students have formulated questions of great concern to them, they will not have sufficient motive power to work purposefully and independently.

For the disadvantaged student, especially, education must be an awakening. What is being studied is not nearly as important as the student's being willingly and actively involved in studying something. In terms of the student's development, the process of learning about something is more significant than the facts or concepts that he develops. The process once learned can be applied over and over again in the continuous acquisition of knowledge. No legitimate question should be considered unworthy of study. The student's own "whys" are far more important than the stylized "why" of the textbook author. It is not surprising what a discussion of human blood in the integrated science class of the diploma program of the present study proved to be the most successful science experience. The students had to prove to themselves that such things as blood types exist. Even the most needle shy student was induced to prick himself for samples so that he could study his own blood. Students were surprised to learn that a black and a white person could have the same blood type. (And the black students found this more difficult to believe than did the white students.)

It should be obvious at this point that the textbook is among the first victims of the change induced by individualization. Obviously, the mass oriented textbook, with its logical presentation of the structure of an academic discipline, is as out of place as a buggy on a super highway. Textbooks certainly may be included in the book collection but only when they have value as reference materials. As has already been indicated, all books and the reading activities associated with them should be deemphasized when working with students who are not oriented to academic activities. This is not to say that reading skills should not be taught; but not as a separate topic. Students should have access to the finest, most interesting, and stimulating collection of books that it is possible to assemble. The important difference may be found in the chain of events.

The learning experience does not begin with a book--an unnatural place for most students to begin. Rather, the learning experience begins with a question or problem that may develop from experiences gained outside school or from a discussion, demonstration, or other school originated experience. The question or problems may be explored in a number of ways, with some form of experimentation at or near the top of the list of preferred types of exploration. Books and reading become part of this process when printed reference materials become the only practical way to answer a question or solve a problem. Indeed, it must be remembered that the nonverbal student, whether deprived or not, will probably never read for pleasure. Certainly, culturally disadvantaged individuals have not had experiences at home to cause them to value books and reading. For the disadvantaged student both natural and environmental factors, therefore, operate to make the suggestion of reading for pleasure a feminine, indeed oldmaidish, cliche.

From this discussion, it should be clear that individualized instruction is not unguided, unplanned, or unstructured. Rather, it requires more and harder work on the part of the teacher than does traditional teaching, and it presents a greater challenge to the teacher's professional competency. Individualized instruction is certainly not ever meant to represent a chaotic free-for-all. If ways are being sought to create situations where students and teachers can aspire to continuously improving, productive, and creative relationships, for the present this way of working may represent the best available solution.

Flexible Grouping and Scheduling: For individualized instruction to operate there must be flexible grouping and scheduling. The teacher must work closely with each student so that he can guide him into the most helpful group situations and assist him in planning the development of his ideas and projects. In addition, the teacher will keep careful records so that he can better follow the development of each student, spot areas of difficulty, and act effectively to help his students overcome their problems. As already described, the teacher must be prepared to listen to his students and to spend much time in discussions with both individuals and groups.

Because of the need for interaction with peers as well as with teachers, grouping is vitally important. On the other hand, when groups become too large, interaction may be inhibited or confused. Teachers and students cannot communicate with each other and relationships are stunted. Certainly, when students and teachers are from different social backgrounds, when students so desperately feel the need to have their individual identities recognized, when students feel negatively toward learning, school, and teachers, it is extremely important that the number of pupils assigned to teachers be kept small enough so that sensitive and effective communication can take place. The argument that hiring extra teachers for the disadvantaged is too costly ignores consideration of what the social costs may be if such teachers are not hired. Such bankrupt verbalizations and the do-nothing behavior that accompanies them are evidence of a total unawareness of the interrelationships between social phenomena and are professionally irresponsible.

Class size, of course, is not the only serious organizational problem encountered when developing programs for the disadvantaged. Inflexible grouping and rigid time schedules also represent artificial barriers to the development of relationships and may seriously interfere with communication. Rare is the teacher who has not had a vital class discussion cut short by the ringing of a bell announcing the end of the period. The decision to ring the bell at that moment was made perhaps years before and with no possible knowledge of the conditions that would exist in that particular classroom on that particular day. This "logical" system of ordering time is a fine example of the middle-class oriented need to organize life into a neat and orderly outline not drawn from the rhythm and flow of life itself but imposed upon it.

The culturally deprived student--with his rejection of formality, his needs for peer interaction and acceptance, perhaps his limited or underdeveloped interest patterns, his lack of self-confidence, and his lost curiosity--is in particular need of opportunities to group and regroup as the situation requires. He may react quite negatively to some teacher or some groups of his peers and must have a way to move out of these situations. He may need to spend most of his time with one particular person with whom he can identify and to whom he can relate. He may need to spend time alone or with a friend or two working with a particular piece of equipment, discussing an urgent or fascinating problem. Flexibility in grouping and in the use of time can permit opportunities for the culturally disadvantaged student to explore, to regain his lost curiousity, and to overcome his apathy.

For many reasons, teachers also need flexibility of time and grouping. Probably the most significant reason is the need to be able to assign students to instructional experiences on the basis of actual student need for the experience and at the time that students are ready for such experiences. With a flexible organization of time, teachers can arrange to spend time with individual students. One of the most significant functions of the teacher may be to listen. Once the teacher has won the confidence of the culturally disadvantaged student, he must be prepared to listen. Lack of a sympathetic and understanding listener is one of the most unfortunate deprivations of the disadvantaged student. He needs to talk, to verbalize his feelings. It is through talk that language and ideas are developed and tested; it is from the reactions of those who hear us that we learn of our worth.

Flexibility of time and grouping also permit teachers freedom of movement. When the teacher is not always tied to a particular spot, he is freed to work with other teachers. Instructional planning and activities can be shared, the problems of individual students can be discussed, and ideas can be exchanged. Teachers who work in this way become more involved with their students. Sharing goals and working together toward them can make teaching much more exciting and meaningful.

Because of the need imposed by the nature of the primary research to develop a diploma program not radically different from high school general education programs now in existence, the diploma program followed a rather traditional high school curriculum. In the same sense, the skill training program may be considered typical of its type. Many students left both programs. For them, these programs did not have sufficient value to outweigh the forces pulling them away.

Since research requirements dictated high school general education and skill training programs that were recognizably similar to those currently in existence, neither type of curriculum should be considered the ultimate in arrangement of instructional experiences for disadvantaged students.

Teacher Education: It is to be hoped that future teachers of the disadvantaged are humanistically oriented and have the capacity to empathize with others. This could be assured through new approaches to the selection of teachers and the role they play in planning the educational process. It also would seem wise to make every effort to attract very able people to this difficult teaching assignment. The available evidence suggests that the more intelligent teacher is more likely to possess superior creative ability and, therefore, may be less conforming in his behavior. Because of this, he may be more likely to respond to different value systems and to be perceptive enough to detect the flaws in his inherited value system. It may be that students who demonstrate the capacity for active but constructive rebellion will prove the most satisfactory teachers of the disadvantaged. It is interesting to note that the teachers in the diploma program who appeared to be the most successful were, in their private lives, actively rebelling against one or more social forces in their own environments. Some had developed very negative feelings toward the prevailing educational establishment, and this served as the bond of identification between them and the students in the programs. Both rejected school as they had known it before they joined the diploma program.

Given future teachers or teachers in-service who may come from upwardly mobile backgrounds but who also possess most of the desired traits or characteristics, it would seem that two areas of professional education are the most pertinent to preparation to teach the disadvantaged: first, knowledge of human development and behavior to help break down culturally inherited stereotypes and to provide a basis for understanding and identifying with students; and, second, technological skills to create vital learning experiences. There is nothing new in these recommendations. Change will take place when the ways of attempting to provide these professional understandings and skills are reoriented away from middle-class patterns and standards.

Much has been said about the values of practicum for future teachers. Student teaching is a well established fact in teacher education and other types of practicum are advocated. Desirable value changes, however, do not take place regardless of the experiences the individual has; they take place because of them. Only certain kinds of experiences can produce changes that will cause teachers to be more accepting of the problems and behavior of the groups most limited socioeconomically. These experiences must be of the kind that will bring teachers and students together under circumstances where they must react to each other as individuals. For some teachers, the practicum experience might be to work with a very gifted teacher in a slum school; for others, it might be working in the children's ward of a city hospital; for still others, it might be tutoring children of migrant workers or working in a day care center. Again, there are many possibilities. The fact is that teachers must have experiences to provide a background powerful enough to generate questions worth studying. The quantity and types of experiences should be decided on an individual basis through joint consultation between the future teacher and his teacher. Again, it may be argued that this could become a very expensive process. To fail to invest what is necessary to provide appropriate professional training for teachers, however, may lead to far greater expense as the problems of poverty become more severe and disruptive to our nation.

It certainly may be agreed that the education of teachers of the disadvantaged should include pertinent concepts from the social disciplines of psychology, anthropology, sociology, and economics. It does not follow, however, that teachers should automatically be required to take formal courses in these disciplines. Concepts should be developed as part of the process of seeking solutions to the student teacher's own questions and concerns or in the development of his plans and projects.

For too long students of education have gained the impression that few of their professors are willing to practice what they preach. It would seem logical to begin the education of teachers by placing them in a learning situation that is representative of the type of situation they are to establish in their own schools. If teachers of the disadvantaged are to individualize instruction for their students, instruction for teachers should also be individualized.

The value, or lack of value, of technical training for teachers has been the topic of much public debate. The fact remains that no profession functions without specific technical training. In a sense, the experiences already described are a part of the technical training for a career in education; but more refined and specialized training also is required. It may be granted that many of the skills of the superior teacher are developed on the job. It is extremely important, however, that the teacher who is new to the teaching of the disadvantaged should possess the skills necessary to be able to experience at least limited success in his initial attempts. Without this success, the opportunity is created for the development of hostility toward students.

The concept of methodology, however, is archaic. Training teachers to teach reading or arithmetic or handwriting or grammar is as outdated and as superficial as the subjects themselves. The emphasis should be on the teaching skills, regardless of the subject. A compilation of these skills probably would include skills such as: the ability to question effectively, the ability to lead group discussions, the ability to recognize when a student needs help and when he should be on his own, organizational skills, etc. It is not necessary to identify the teaching skills that must be mastered but only to indicate the need to clarify these skills and to design around them the professional training of future and in-service teachers. Obviously, even students preparing to be teachers should not be required to study skills that they already have mastered.

Teachers who possess the basic personality characteristics that predispose them to sympathetic and humanitarian attitudes toward others, who have gained insights into the handicap of poverty, who have found a way to identify with the culturally disadvantaged, who have mastered essential teaching skills, and who also have creative leadership, flexible school organization, and an individualized curriculum, should be able to develop positive relationships with culturally disadvantaged students and, through these relationships, contribute their share toward the relief of some of the problems of poverty.

Education and Mobility

In recommending the type of career education described above, it is not with the expectation that it will produce major changes in the opportunities open to the poor. Even if this style of education could be established in schools throughout the nation--an enormously big if--the degree to which it would assist the occupational mobility of young people from poverty families is questionable. There is, of course, a relationship between amount of education and amount of income. But this does not mean that obtaining more education will automatically increase one's income. The simple education--income correlation fails to control for individual differences in ability and the socioeconomic status of families, both of which are also correlated with amount of education obtained and both of which also influence occupation and income. Anderson (1961) examined data on vertical mobility and formal education in England, Sweden, and the United States and concluded that ". . . education is but one of many factors influencing mobility, and it may be far from the dominant factor." (p. 569) Hirsh and Segelhorst (1965) tested the association of education and income while holding constant the effect of nine other variables, such as race, sex, and occupation of father. They found for males that formal education explained only twelve percent of the variation in income.

These studies examined education as it is traditionally conducted, which has automatically handicapped youngsters who have difficulty fitting the expected mode. A more suitable type of education might increase their opportunities, somewhat, but it would not be wise to expect or promise too much.

A large part of the reason there is "dropout problem" is that there are limited employment possibilities open to the teenager and few of these offer any real opportunity to learn skills which would enable a youngster to enhance his employability. The young person who wants to get ahead--even for goals as modest as those sought by the subjects in this study--have practically no alternatives outside of the school system to get on a mobility ladder.

Folk (1969), in an article that describes the difficulties all young people have finding employment, states:

> One of the major problems of the school dropout is that he becomes committed to the labor force before he is eligible for most career jobs. In short, he must compete with students (who are often better qualified in the eyes of employers) for youth jobs, and he must grow older before he becomes eligible for career jobs (pp. 29-30).

Bachman, et al. (1971) reports another investigation that found little difference in the employment experiences of graduates and dropouts. Data from the Youth in Transition study, being conducted by the Institute for Social Research of the University of Michigan, indicated that graduates tended to be employed more than dropouts at the time of their post-high school interview (87 percent compared to 71 percent). This, however, was more a result of differences in background and ability than of the fact of dropping out. The longitudinal nature of the data from the Youth in Transition study also allowed a comparison of the responses of graduates and dropouts while both were still in school. Most of the differences between the groups found in the follow-up also existed before dropping out occurred. In other words, dropping out is not so much a problem in itself as a symptom of other problems the basis of which is ". . . a serious mismatch between some individuals and the typical high school environment." (Bachman, et al., 1971, p. 171) And, confirming one of the basic conclusions of the present study, Bachman reports that the lower the family socioeconomic level, the more likely a boy is to drop out.

The basic problems of the disadvantaged result from the inequality of opportunity in our society. This inequality is reflected in many ways--most obviously, of course, is low income. Low income causes the poor to adopt styles of behavior which are adaptive to the conditions of their lives, but which are in many ways dysfunctional to the demands of the larger society into which most must move if they hope to leave their impoverished circumstances. The philosophy underlying attempts at remedial education or retraining is essentially one of overcoming personal deficits to promote individual mobility.

Such programs make no attempt to change the opportunity structure which confronts the poor people. The evidence gathered in this study, however, suggests that it is this lack of opportunity that restricts poor people more so than any personal deficits. Attaining a diploma does not appear to open doors that were previously closed; nor does it seem to make much difference in subsequent employment if one acquires a skill that is needed in the labor market. A second-chance program yielding a diploma or skill training will not give its participants the family and friends who can refer them to good jobs. It will not pay tuition or living expenses at college. It will not give access to a union that restricts its rolls to relatives of members. These are the basic barriers in our society and a program that focuses on changing the individual can have no effect on these barriers. The kinds of jobs available to people from the lower strata of society are limited, and relatively minor distinctions among the various members of these lower strata seem to have little influence on who gets which job.

The hard fact in our society is that there just are not enough jobs with at least some attractive features for everyone who wants such jobs. The gate keepers who control entrance to these occupations thus must find some means of choosing among the many applicants who wish to obtain these jobs. Because it is so difficult to make decisions concerning the individual qualifications of each applicant, various screening criteria are employed. The words "high school diploma required" in a want ad serve to limit the number of applicants who have to be considered for a job. A qualification test with a minimum cut off score eliminates everyone below that score. But even if these restrictive practices are abolished--as a recent supreme Court decision requires--the problem of making choices among applicants will remain. As the traditional methods are abolished, other methods will be revised. While remedial education and skill training programs may change the relative position in the queue of applicants, they do little to change the number of openings for which the queue is waiting.

The failure of attempts to increase the employability of dropouts through retraining projects has contributed to the protests of critics such as Berg (1968, 1970) and Goodman (1965, 1970), who recognize the unrealistic nature of employers demanding at least a high school diploma for entrance into many unskilled and semiskilled vocations.

Berg (1968) claims that despite the availability of evidence that programs of remediation designed to correct the "shortcomings" in the labor market have proven generally unsatisfactory, little has been done to shift the focus of such efforts to other lines of endeavor. He contends that the rationale of pointing to low educational achievement as the prime cause of unemployment among the poorly educated while skilled jobs go unfilled is poor logic, that such credentialism enforced arbitrarily by employers is not a natural function and defeats their own goals of hiring workers competent to carry out the demands of the particular jobs. It is further contended by Berg that there is little evidence that most credentials directly contribute to success on many jobs. He suggests that ". . . focusing on educational achievement may in fact distract managerial attention from worker characteristics that are relevant to job performance (pp. 12-13)."

After citing the results of several studies which showed an inverse relationship between level of formal educational attainment and such variables as job tenure, technical performance, worker productivity, and job satisfaction, Berg concludes:

> Efforts to keep young people in school seem to be more an artifact of loose labor-market conditions than of real job entry requirements. It would probably be more reasonable to upgrade people in the middle and lower-level positions of the work force by providing educational facilities appropriate to their age, needs and ambition than to downgrade people by raising the job requirements for the higher-level jobs to which they aspire. The pressure then would be reduced on lower-level jobs into which dropouts and others could move in larger numbers. Only after young people become accustomed to income and develop middle-class aspirations are they apparently interested in pursuing the balance of their education. Yet, we have, typically, inadequate facilities for the formal education of youths aged 20 to 25 (Berg, 1968, pp. 13-14).

Hopefully, then, Berg suggests, if requirements for jobs in the public sector were realistically adjusted and the resulting successes publicized, the private sector would soon follow suit with the result of a more open and rational set of requirements for job entry.

Echoing Berg's sentiments, Goodman has strongly attacked the belief that increased education results in better jobs and better job performance. In People or Personnel (1965), he argues that most factory jobs require only three to six weeks' training, dependent on automation, with no previous schooling or training. He continues:

> Nevertheless, there is a great noise about the need for long years of schooling in order to fit into the economy. Youth are warned not to drop out of high school or they will not have the skills required for employment. I am afraid that for most poor youth, the jobs they will get, this is a hoax. The evident purpose of the schooling is baby-sitting and policing, during a period of excessive urbanization and youth unemployment. The only relevant skill that is taught in school is to be personnel: punctual and well-behaved (p. 133).

In a more recent volume, Goodman (1970) launches an attack against the entire educational establishment and the myth that what is being taught is related to job success. He begins the diatribe with:

> This system [education] is manned by the biggest horde of monks since the time of Henry VIII. It is the biggest industry in the country. I have heard the estimate that 40 percent of the national product is in the Knowledge Business. It is mostly hocus pocus. Yet the delusory belief of parents in this institution is quite absolute, and school diplomas are in fact the only entry to licensing and hiring for every kind of job (p. 21).

Goodman continues by stating the need to reevaluate licensing and hiring practices, increasing their relevance to the jobs in question, and decreasing the need for formal credential which he calls "mandarin requirements" (p. 87), and which have little relationship to job success. He, like Berg, claims that the time for formal education is after the person has successfully entered the job market (perhaps in the form of an apprenticeship), had positive experiences, and clarified his personal goals. Employers might then provide the most meaningful training within the context of the job situation.

If such criticisms are justified, then efforts at retraining dropouts in essentially the same school atmosphere which once they abandoned would seem, at best, misguided. Reifying the empty promise of the educational system to disadvantaged youth is neither expedient nor fair. They emerge from remediation neither happier nor better employed, with either a second-rate set of credentials of dubious merit or another personal failure in dealing with the establishment. In either case, the primary goal of the trainee, worthwhile and lucrative employment, is no closer to attainment, and neither is the goal of the prospective employer, a productive and reliable worker. As both Berg and Goodman have pointed out, the realization of both goals would be that much closer with the abandonment of credentialism and the institution of realistic job hiring practices.

IMPLICATIONS FOR RETRAINING PROGRAMS

Increasing Opportunities

In stating the implications discussed below it is recognized that they go considerably beyond the limited data on which they are based. They are, nevertheless, stated boldly for despite the fact that this study was conducted in one specific geographic area with a relatively small number of subjects, it has some strengths which tend to offset these limitations. First of all it was a study in which the experimental and control subjects were selected from the same population. There were some departures from strict random assignment to conditions, but the procedures were as rigorous as this type of study would allow. Second, the dropout subjects were more carefully matched with regular high school graduates than is typical of such comparisons. Third, the post-program experiences of the subjects were followed for almost three years. Although the interview completion rate among all the subjects was only about 60 percent, among the subjects who completed the experimental programs it was 80 percent or better for both follow-ups. Fourth, and finally, the results from two longitudinal, large-scale studies tend to confirm the results found in the present study. These are surveys of representative, nationwide samples of younger people. Analyses of the Project Talent data (Combs and Cooley, 1968) and the Youth in Transition data (Bachman, et al., 1971) both indicated that when graduates and dropouts with similar characteristics were compared, there were few differences in their employment experiences.

The lack of positive results found in this and other studies will not cause retraining programs to be dropped as a means of helping young people who have not benefited from their initial school experiences. Nor should they. Despite the failure to find differences among the groups, there can be little doubt that the diploma is the basic credential in our society. And even though obtaining it, alone, does not open up many opportunities, it, in combination with other characteristics of the individual and with access to more resources, does increase a young person's options. Put another way: awarding a diploma to one of two students from poverty backgrounds, who are similar in major characteristics, will probably have minor effect upon the opportunities available to the one who receives it. For two middle-class students, however, who are similar in major characteristics, the award of a diploma to one would make available many options that would be denied the student without the diploma. To the middle-class youngster, college, civil service jobs, and apprenticeships become accessible once the diploma is obtained. These opportunities are usually not available to the property level young person with or without the diploma.

The objection may be raised that there must be something wrong with the middle-class youngster who does not obtain a diploma--and the failure to obtain a diploma merely reflects this personal problem. But that is precisely the point being made in this discussion. The middle-class youngster, because of traits acquired in his family and because of resources his family can make available, has a variety of options open to him if he follows the rules and acquires the proper credentials. The lower-class or poverty youngster does not have these options regardless of whether he acquires the credentials or not. That is why obtaining a diploma had little effect upon the lives of the subjects in this study. The resources that are necessary after the diploma was obtained were not available, and the diploma, in and of itself, made little difference.

This discussion would suggest, then, that in addition to providing second-chance educational and skill training opportunities, programs must attempt to provide some of the post-training resources that are necessary for the education to have any real payoff. One suggestion to achieve this is that no training program should be offered unless the trainees can be guaranteed placement in a job related to their training upon successful completion. This guarantee should be made in the form of a written contract between the trainee and the training institution with built-in penalties if the institution defaults on its responsibility for placement. The trainee, for example, could be reimbursed, for the time he spent in training, an amount equal to the difference between his training stipend and the average wage level for entry level workers in the occupational skill for which he was prepared.

This proposal would have several consequences for training institutions. It would make them improve their training methods to assure that they would work with the students to whom they were applied. It would require that they match their offering much more closely to the needs of the labor markets in which the trainees will seek jobs. If the area were a depressed one, with virtually no need for additional workers, it would prevent training programs which cannot payoff because employment is not available.

If programs were to guarantee placement, it is likely that there would be considerable "creaming"--selecting the most able applicants to assure they will be capable of benefiting from the training and obtaining employment. Creaming, however, is not necessarily undesirable. If there are a limited number of training slots, and employment possibilities, it is a rational strategy to select the applicants with the greatest potential for successful placement. There is, of course, the adverse effect that those among the disadvantaged with the most serious handicaps could be excluded for all but the lowest level educational programs. A serious question can be raised that this is more unfair than admitting an applicant to a program which he has little hope of successfully completing.

A negative possibility of guaranteed placement would be the danger that programs that anticipate difficulty placing their students might attempt to cause them to quit either by presenting material that is too difficult for them to master or through other negative treatment. One precaution against this would be to approve programs only where documented need for the trainees could be provided. Another precaution would be a detailed syllabus with the behavioral objectives expected of students at each stage of the training cycle. These objectives should be written in language that could be understood by students. The students could then assess their own progress and compare it to the assessments made by the training personnel. In cases where the student believes he is making satisfactory progress and the institution says he is not, the dispute could be decided by a third party--probably the funding source.

Guaranteed placement would serve to counteract much of the laxness that characterized many programs for training the disadvantaged. The program would be directly accountable to its own students for its performance. The self-fulfilling prophecy of many teachers--these people just can't learn--would be replaced by a guarantee of success, and the teachers own job security would require that his students learn. Although guaranteed placement may sound revolutionary for programs sponsored from public funds, it has long been accepted practice for private, propriatary schools. Many of these schools owe their existence to the guarantee they give their students that upon completion they will place them in jobs for which they are trained.

Another way in which opportunities for the poor could be increased is by government programs directly aimed at creating jobs.

During the late 1960's when the follow-up study was conducted, the country had low unemployment rates. In the area where the study was conducted, demand for unskilled labor was quite brisk. Nevertheless, significant proportions of the subjects who took part in this study could not find employment. The federal government, however, was able to provide employment for almost half of the skill training students through the local community action agency. It is of interest that, within the range of jobs held by subjects in this study, these were fairly high status but low paying jobs. They were human services jobs which governmental agencies are in the best position to provide. It seems likely that these jobs, despite their low wages, were more attractive than the secondary labor market jobs[2] typically held by the poor.

Within the past year the federal government has begun direct job creation to the greatest extent since the depression of the 1930's. The Emergency Employment Act of 1971 authorized federal funds to be used to create jobs at the state and local government levels when the unemployment rates exceeded specified levels on a national or local basis. These jobs have all been in the public sector and have paid an average annual salary of $7,200. (U.S. Department of Labor, 1972) They are without doubt far more attractive than the average job available to poor people. Poor people, however, are not obtaining the majority of these jobs. _The Manpower Report of the President_ states that of the first 45,000 hired, one-third were disadvantaged. (U.S. Department of Labor, 1972) Ginzberg (1972) reports that only about 23 percent of those hired are not high school graduates.

The program, however, was not intended primarily to create jobs for the disadvantage, and it should not be judged solely on this basis. All efforts to create more jobs in the economy should have some benefits for those people who have the most problems obtaining employment. The early evidence suggests, however, that the difficulties which the poor encounter in the normal labor market are being reflected to some degree in the Public Employment Program.

Job creation and guaranteed placement are key elements of New Careers programs (Pearl and Riessman, 1965). Before one of these programs begins, cooperation of an operating agency, generally in educational, health, or public service fields is obtained. The trainees are hired by the agency and given on-the-job instruction as well as released time for courses in regular academic institutions. They are usually paid for the released time. Where these programs have been established, they have usually been very successful. However, they have had problems finding agencies willing to accept the requirements of specified job and educational ladders and pay for released course time.

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[2] Piore (1969) describes such jobs as characterized by low wage, low status, poor working conditions, unstable employment, etc.

Another source of resistance have been the professional who sometimes feel threatened by the introduction of paraprofessional trainees. These professionals have reached their own occupational status by persisting through the accepted educational route and are often reluctant to allow the creation of alternative routes. A variety of reasons are given for this resistance but one theme--"I made it the hard way and so should they"--underlies most of them.

The problems which New Careers programs have experienced provide another example of a basic theme that has run through this discussion: there are a limited number of attractive jobs in society and the poor have less access to these jobs than their more fortunate competitors, and overcoming educational barriers is not as important as increasing access to opportunities.

General Education or Skill Training?

The second major issue to which the study was addressed was whether it is preferable to give general training which presumably improves the individuals' ability to communicate in all forms, and to deal with symbols and concepts, or to give training in the specific skills required for various occupations. Because of the major differences in the quality of the two programs, the present study does not provide a powerful test of the two approaches. Nevertheless, the relative lack of post-program success for the subjects who completed the diploma program--which was the better of the two--does not support the general approach. If the general program could not demonstrate a post-program advantage in comparison to the skill training program in this study, it is unlikely that it would ever do so.

The other hypothesized effects of the programs--increases in self-esteem, stronger sense of the ability to control one's life, continued education, greater political awareness--were equally absent during the follow-ups for both programs, and almost so for the regular high school graduates. Whatever the merits of general versus vocational education at the secondary level, there seems little question that a vocational emphasis is more appropriate after high school, especially for young people who leave high school before completing it. These students have little appreciation of knowledge for knowledge's sake. A retraining program is not going to make of them educated men and women with an appreciation of their culture and the ability to make learning a life-long endeavor. To pretend that it can have such results is to ignore those objectives it can more realistically achieve.

It is probably time that training programs directed to adults and young adults should renounce the rhetoric of rehabilitation. It is unlikely that these programs are going to have major impact on the basic values and personal characteristics of their trainees. The experiences that these individuals have undergone in their homes and schools have produced traits that will not be markedly changed by the minor interventions that most training programs can make. Programs should concentrate on job skills and provide assurance the trainees will have the opportunity to use these skills--for jobs are of prime importance to the trainees.

Enough evidence has been accumulated to overcome the naiveté with which the nation launched its War on Poverty. People are not going to be changed to any great extent with the resources available, or the manner in which they are presently allocated, to traditional education and training programs. It is a reasonable assumption that the results of a program are going to be somewhat proportional to the effort put into it. Given this assumption and given the amount of effort that is necessary for significant impact, how should our priorities be set? With a given number of dollars and a wide range of problems, how should the dollars be allocated among the problems? If a few problems are selected to receive a major effort, the objectives of the program established to deal with the problems are far more likely to be achieved than if a little money is spent on everything. Put another way, a program has a better chance for success if more funds are spent on a small proportion of the population than if a little money is spent on everyone. But how are those who would receive the funds to be selected, and, even if they were selected, would the remainder of the population permit such an allocation? These are essentially political questions which are beyond the scope of the present study. The results of this study do point out how difficult it is to produce significant changes in the lives of people and in the opportunities available to them.

Where, then, does this leave programs for dropouts? The results of the present study suggest that such programs have few long-range effects on the subjects who take part in them. The analysis of the allocative and selective functions of the public schools presented above provides little basis for hope that they will be changed to better serve potential dropouts. In fact, in the thirty-three month period covered by this study it made little difference whether the subjects graduated from high school, obtained a diploma or skill training through the experimental programs, or simply withdrew from school and got a job. The opportunities available to them by virtue of their social class and sex seemed to influence their employment experiences far more than the possession of a particular certificate or the completion of a specific type of training.

Although there is no final solution to problems such as this, one can hope that some of the inequality among the classes in society might be minimized. One way to approach this would be through an educational system that provides more options to the student, one that does not require that he adopt himself to a rigid format, but instead provides varied styles and methods of learning. It is unlikely that these will be accepted if they are presented as a way of "doing something" for the poor. They must be changes from which all will benefit and, indeed, they would be. An education which stressed respect for the individual, relevancy, and flexibility would come closer to educating the children of all segments of society, and with an adequate education each young person might come closer to realizing his own potential. Until the public schools can be restructured to provide such an education, it will be necessary to have available a second chance to those young people who did not profit from their initial educational exposure. In some cases a third and fourth chance may also be necessary. But the probable return on such programs must be evaluated realistically. Because they are unlikely to have major impact on the lives of their participants, they should not be promoted as though they will. The participants who complete them will probably have favorable attitudes about them and possibly evidence an increase in skills, but these changes are unlikely to open many doors that were previously closed. Until ways of opening these doors are found, the results of retraining programs will be limited.

APPENDIX A

SUMMARY TABLES OF PROGRAM EFFECTS DURING EXPERIMENTAL PHASE OF PROJECT

TABLE A-1

Intercorrelations of Test Scores
(Decimals Omitted)

	Otis IQ	Bera IQ	Reading Achievement	Arithmetic Computation	Arithmetic Concepts	Self-Esteem	Adjective Check List (Favorable)	Adjective Check List (Unfavorable)
Otis IQ	72	51	79	65	60	33	11	06
Bera IQ	51	78	47	42	39	08	-05	06
Reading Achievement	69	50	81	61	51	26	09	02
Arithmetic Computation	47	39	54	70	60	23	23	-15
Arithmetic Concepts	55	41	56	71	61	13	21	-03
Self-Esteem	20	10	27	14	14	42	10	06
Adjective Check List (Favorable)	06	05	05	04	02	16	64	-45
Adjective Check List (Unfavorable)	-01	01	-08	-02	-02	-05	-58	61

Lower Matrix - Pretest intercorrelations

Upper Matrix - Posttest intercorrelations

Diagonal - Pre-post intercorrelations (i.e., reliability coefficients)

TABLE A-2

Pretest and Posttest Intelligence Scores

Group	N	Mean Verbal IQ			Mean Nonverbal IQ		
		pretest	posttest	difference	pretest	posttest	difference
Diploma	60	92.1	94.0	+1.9*	98.4	105.0	+6.6**
Skill Training	28	91.5	93.4	+1.9	99.2	103.9	+4.7**
Control	(20-63)[a]	93.4	89.0	-4.4	99.9	103.0	+3.1**
Significant difference among group scores		No	Yes**		No	Yes*	

[a] A range of Ns is reported, since different numbers of subjects took some tests

*Significant at .05 level

**Significant at .01 level

TABLE A-3

Pretest and Posttest Scholastic Achievement Scores
(Reading, Arithmetic Computation, and Arithmetic Concepts)

Group	N	Mean Reading Score[a]			Mean Computation Score[a]			Mean Concepts Score[a]		
		Pretest	posttest	difference	pretest	posttest	difference	pretest	postest	difference
Diploma	60	7.59	8.35	+0.76**	6.20	8.08	+1.88**	6.51	7.76	+1.25**
Skill Training	(26-27)	7.61	7.48	-0.13	6.62	7.26	+0.64	7.12	7.37	+0.25
Control	(57-58)	7.06	7.43	+0.37	6.66	6.72	+0.06			
Significant difference among group scores		No	Yes*		No	Yes**		No	Yes*	

[a] Scores reported in terms of grade-achievement levels.

*Significant at .05 level

**Significant at .01 level

TABLE A-4

Pretest and Posttest Self-Evaluation Scores

Group	N	Favorability Towards Self[a]			Unfavorability Towards Self[b]			Self Esteem[c]		
		pretest	posttest	difference	pretest	posttest	difference	pretest	posttest	difference
Diploma	60	46.2	49.0	+2.8*	53.3	50.4	-2.9**	40.1	44.3	+4.2
Skill Training	27	44.5	46.0	+1.5	51.6	52.9	+1.3	49.4	39.0	-10.4**
Control	(54-63)	44.6	43.5	-1.1	53.1	52.2	-0.9	36.0	33.0	-3.0
High School Graduate	(81-85)	48.6			46.8			38.4		
Significant difference among group scores		No	No		Yes**	No		Yes*	Yes*	

[a] From Adjective Check List (Favorable) scale: Number of favorable adjectives chosen as self-descriptive

[b] From Adjective Check List (Unfavorable) scale: Number of unfavorable adjectives chosen as self-descriptive

[c] Mean score on Self Esteem Inventory, corrected for lies

*Significant at .05 level

**Significant at .01 level

APPENDIX B

MULTIPLE REGRESSION ANALYSES

This appendix presents the complete tables for the multiple regression analyses referred to in the text of this report. The purpose of these analyses is to test the independent effect of each variable while holding the effects of all other variables in the equation constant. Thus it is possible to test the effects of completing the experimental programs while holding the effects of sex and color constant.

To conduct these regressions the qualitative variables were coded into categorical or dummy variables of mutually exclusive categories. These categories can only be coded "0" or "1." A "0" code means the subject does not fit that category. A "1" code means he fits that category and none other in the set. For these analyses program classification was divided into seven categories: the completers of two experimental programs (two categories); the subjects who withdrew from these programs (two categories); the control subjects who received no education or training (one category); and the regular high school graduates from the general and vocational curricula (2 categories). In a similar manner the sex and color variables were coded into mutually exclusive categories: males-females, whites-blacks.

When variables are coded into a dummy format, one element of the set is eliminated from the equation and enters the intercept term. All other elements in that particular set are thus interpreted as positive or negative deviations from the eliminated variable. In Tables B-1 through B-17 the elements that entered the intercept were those for the control group, the female, and the black subjects. Therefore if one of the program classifications has a significant partial regression coefficient, it means that this category is significantly different from the value for the control group; if the sex variable is significant, it means males differ from females, and if the color variable is significant, it means whites differ from blacks.

The dependent variables for each of the regressions are indicated in the titles of the tables. Many of these dependent variables are derived indices that were calculated to reflect the total employment experiences of the subjects. The manner in which they were calculated is described below.

Indices of Total Employment

Equivalent Months Worked: Equivalent months worked was calculated for each subject by weighting the months worked in each job to a 40 hour per week standard and summing the weighted months over all jobs. The following formula was used:

$$\text{Equivalent Months Worked:} \quad \sum \frac{(HWWj \cdot MWj)}{40}$$

Where:

HWWj = hours worked per week on job j

MWj = months worked on job j

This index was calculated separately for jobs held during and after the programs or high school. The value for jobs held during the programs was entered as an independent variable and regressed against the dependent variables of equivalent months worked after the program.

Total Earnings: Total earnings were calculated by multiplying the hourly leaving wage for each job by hours and months worked in the job. (No matter how earnings were reported during the interview, they were converted to an hourly rate.) The resulting product was then multiplied by 4.33, a constant for the number of weeks in a month. The calculations for each job were summed over all jobs. The formula:

$$\text{Total Earnings} = \sum (LWj \cdot HWWj \cdot MWj \cdot 4.33)$$

Where:

LWj = hourly leaving wage on job j

HWWj = hours worked per week on job j

MWj = months worked per week on job j

4.33 = a constant for the number of weeks in a month

Total earnings were computed separately for jobs held during and after the programs or high school. The use of the leaving wage, rather than an average of the starting and leaving wages, probably inflated this index slightly.

Average Wage, Average Monthly Earnings: Average wage and average monthly earnings are both derived from total earnings. Average wage was calculated by dividing total earnings by total hours worked. Average monthly earnings was calculated by dividing total earnings by equivalent months worked. These are thus practically identical indices and were both run only to check if there were coding or computer programming errors that would yield conflicting results. As it turned out, the patterns of results were identical. The regression coefficients differed, of course, because the indices had different values. The pattern of significant coefficients, the proportion of explained variance, and the statistical tests were identical.

Wage Progression: A measure of average monthly increase in wages was constructed. This index consisted of subtracting the starting wage (in hourly terms) on the first job each subject held from the current or leaving wage on the most recent job held. The result of this subtraction was divided by equivalent months worked. The formula:

$$\text{Wage Progression} = \frac{(CW - SW)}{EM}$$

Where:

CW = current (or leaving) wage on most recent job

SW = starting wage on first job held

EM = equivalent months worked

Job-Training Relatedness and Job Satisfaction: The indices of job-training relatedness and job satisfaction were essentially averages of each subject's ratings for each job he had held. The subjects rated the degree to which they used the things they learned in their jobs on a five point scale from "all of the time," scored 5, to "never," scored 1. These codes were averaged across jobs for each subject. "Not in program" answers, which were received from control subjects and early program dropouts were coded "0" and hence lowered the mean for this variable. Similarly each subject rated his degree of satisfaction with various aspects of his job on a scale from one to seven. The ratings for each aspect were averaged separately for each subject. The average job-training relatedness and the average satisfaction ratings were both multiplied by ten to avoid decimals. The means in the text, Table 27, are adjusted to the actual figures but the tables in this appendix show the actual index values used in the analyses.

The satisfaction ratings for jobs held during the programs or high school were averaged separately from the ratings for jobs held after the programs or high school. The values for jobs held during the programs were entered into the equation as independent variables and regressed against the average ratings for jobs held after the programs. The rationale for using indices of employment during the programs or high school as independent variables was that those subjects who worked during their participation in the programs or while still in high school could differ in significant ways from the other subjects.

By entering indices of their experiences during the programs into the equations as independent variables, the effects of these indices on the post-program dependent variables were held constant, thus yielding a more precise estimate of program effects.

Symbols Used in the Tables

b = partial regression coefficient

s = standard error of coefficient

$\bar{R}^2$ = coefficient of determination, corrected for degrees of freedom

TABLE B-1

Multiple Regression Analysis of Equivalent Months Employed After Programs

Variable	1967		1969		1967-69	
	b	s	b	s	b	s
Male	1.80	1.03	8.11**	1.78	7.76**	2.05
White	.92	.97	1.43	1.72	2.19	1.93
Program						
Diploma completers	-1.46	1.48	-3.96	2.62	-6.26*	2.93
Skill completers	-1.17	1.87	-.23	3.31	-3.19	3.68
Diploma dropouts	4.74	1.94	-5.21	3.75	2.67	4.22
Skill dropouts	3.03	1.42	-.63	2.65	-.04	2.98
H.S. - General	.34	1.48	-2.98	2.44	-3.10	2.81
H.S. - Vocational	.61	1.86	-3.03	3.26	-2.20	3.86
Number of jobs held	1.52**	.41	1.22	.74	2.39**	.56
Months employed during program	.29**	.08	.34	.27	.80	.16
Job-training relatedness	.12**	.03	.10	.06	.27**	.08
Number of observations	232		204		232	
Explained variance ($\bar{R}^2$)	.19		.13		.32	
Intercept	2.40	1.45	8.15**	2.63	4.27	3.03
Standard error	6.70		11.08		13.49	
Mean of dependent variable	10.28		15.47		21.73	
F-Ratio	6.08**		3.71**		10.70**	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-2

Multiple Regression Analysis of Total Earnings After Programs

Variable	1967		1969		1967-69	
	b	s	b	s	b	s
Male	129.69*	54.37	565.32*	88.76	506.74*	98.44
White	10.74	51.26	27.12	85.59	83.95	92.32
Program						
Diploma completers	-57.10	78.16	-209.80	130.19	-284.10	139.72
Skill completers	-69.53	98.63	-96.71	165.00	-167.27	176.06
Diploma dropouts	245.81*	102.12*	-193.91	186.99	245.76	201.73
Skill dropouts	176.61*	74.86	-75.38	132.49	7.23	142.49
H.S. - General	15.11	77.95	-222.61	121.74	-197.20	134.25
H.S. - Vocational	102.64	98.02	-187.63	102.62	-106.77	184.71
Number of jobs held	52.32*	21.57	8.83	36.89	65.15*	26.51
Job-training relatedness	3.39	1.78	3.11	3.23	10.24*	3.88
Total earnings during program	0.39	.10	.86*	.35	1.33*	.20
Number of observations	232		204		232	
Explained variance ($\bar{R}^2$)	.18		.24		.38	
Intercept	41.53	76.91	405.08*	131.23	149.45	145.39
Standard error	352.73		551.71		643.09	
Mean of dependent variable	358.31		668.41		861.42	
F-Ratio	5.61**		6.74**		14.15**	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-3

Multiple Regression Analysis of Average Monthly Earnings After Programs

Variable	1967		1969		1967-69	
	b	s	b	s	b	s
Male	91.86**	22.34	173.76**	20.92	150.81**	18.93
White	-3.83	20.97	-19.10	20.23	-22.38	17.81
Program						
Diploma Completers	-79.85*	32.02	-5.47	30.89	-27.63	27.01
Skill Completers	-72.88	40.33	-23.39	38.99	-43.94	33.95
Diploma dropouts	-12.20	41.96	20.57	44.17	-16.16	38.95
Skill dropouts	-17.19	30.76	-21.50	31.21	-21.42	27.50
H.S. - General	-28.91	32.02	6.78	28.71	-11.34	25.91
H.S. - Vocational	-3.07	40.23	11.53	38.42	-7.85	35.55
Number of jobs held	10.88	8.86	-14.36	8.72	-2.50	5.13
Months employed during program	.11	1.76	-.78	3.14	.93	1.46
Job-training relatedness	1.06	.73	-.40	.76	.38	.75
Number of observations	232		204		232	
Explained variance ($\bar{R}^2$)	.12		.29		.25	
Intercept	251.89**	31.42	360.05**	30.90	312.22**	27.89
Standard error	144.88		130.35		124.33	
Mean of dependent variable	306.57		399.54		355.93	
F-Ratio	3.84**		8.58**		8.09**	

*Significant at p. = .05
**Significant at p. = .01

TABLE E-4

Multiple Regression Analysis of Average Wage After Programs

Variable	1967		1969		1967-69	
	b	s	b	s	b	s
Male	.54**	.13	1.03**	.13	.88**	.11
White	-.03	.12	-.10	.12	-.13	.10
Program						
Diploma completers	-.45*	.18	-.05	.19	-.18	.16
Skill completers	-.42	.23	-.14	.24	-.26	.20
Diploma dropouts	-.06	.24	.09	.27	-.11	.23
Skill dropouts	-.09	.18	-.14	.19	-.14	.16
H.S. - General	-.16	.18	.03	.17	-.09	.15
H.S. - Vocational	-.01	.23	.05	.23	-.06	.21
Number of jobs held	.06	.05	-.09	.05	-.01	.03
Months employed during program	.00	.01	-.01	.02	.00	.01
Job-training relatedness	.01	.00	-.00	.00	.00	.00
Numer of observations	232		204		232	
Explained variance ($\bar{R}^2$)	.12		.28		.25	
Intercept	1.44**	.18	2.08**	0.19	1.79**	.16
Standard error	.84		.79		.73	
Mean of dependent variable	1.77		2.31		2.05	
R-Ratio	3.38**		8.16**		8.07**	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-5

Multiple Regression Analysis of
Earnings Progressions After Programs

Variable	1967		1969		1967-69	
	b	s	b	s	b	s
Male	.08	1.20	1.35	1.03	2.98**	1.02
White	1.06	1.17	.91	.95	.21	.95
Program						
Diploma Completers	2.93	1.80	-1.02	1.43	.43	1.45
Skill Completers	2.69	2.26	-2.56	1.83	1.90	1.81
Diploma dropouts	.19	2.34	-.66	2.09	-.77	2.06
Skill dropouts	1.99	1.72	-3.12	1.46	-.98	1.46
H.S. - General	1.62	1.77	.53	1.36	2.87	1.38
H.S. - Vocational	3.49	2.22	-2.03	1.81	.32	1.89
Number of jobs held	.05	.51	.42	.41	.54	.28
Months employed during program	.05	.08	-.07	.04	-.10**	.03
Job-training relatedness	-.05	.04	-.03	.04	-.02	.04
Number of observations	232		204		232	
Explained variance ($\bar{R}^2$)	.00		.03		.06	
Intercept	-.45	1.74	3.58*	1.48	2.05	1.49
Standard error	8.12		6.14		6.63	
Mean of dependent variable	1.57		2.83		3.19	
F-Ratio	.54		1.63		2.31*	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-6

Multiple Regression Analysis of Job-Training Relatedness

Variable	1967		1969		1967-69	
	b	s	b	s	b	s
Male	-1.60	1.92	-6.19**	1.89	-3.14*	1.60
White	.67	1.92	1.57	1.89	.71	1.59
Program						
Diploma completers	12.67**	2.80	10.86**	2.74	10.28**	2.32
Skill completers	8.71*	3.64	4.45	3.65	5.17	3.02
Diploma dropouts	3.32	3.78	3.29	4.15	.99	3.46
Skill dropouts	.57	2.79	-2.20	2.92	-1.75	2.45
H.S. - General	8.47**	2.84	8.20**	2.63	7.28**	2.25
H.S. - Vocational	18.01**	3.42	13.71**	3.48	12.35**	3.06
Number of jobs held	-1.06	.81	.27	.82	.24	.46
Number of observations	232		204		232	
Explained variance ($\bar{R}^2$)	.16		.20		.16	
Intercept	14.72**	2.63	17.39**	2.60	16.13**	2.24
Standard error	13.25		12.26		11.14	
Mean of dependent variable	18.83		20.91		20.47	
R-Ratio	5.88**		6.66**		5.94**	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-7

Multiple Regression Analysis of Average Satisfaction With Work After Programs

Variable	1967		1969		1967-69	
	b	s	b	s	b	s
Male	-4.21	2.59	.16	2.46	-2.15	2.09
White	3.42	2.52	-1.61	2.36	-.08	2.02
Program						
Diploma completers	-11.16**	3.85	-5.04	3.61	-9.05**	3.08
Skill completers	5.16	4.85	-8.21	4.57	-3.53	3.87
Diploma dropouts	-3.75	4.97	-1.67	5.17	-3.64	4.40
Skill dropouts	.46	3.68	1.65	3.66	2.69	3.13
H.S. - General	-6.09	3.88	-.01	3.38	-2.14	3.00
H.S. - Vocational	-5.18	4.82	-3.98	4.50	-4.64	4.04
Number of jobs held	1.09	1.06	-1.38	1.02	-.07	.59
Job-training relatedness	.45**	.09	.25**	.09	.35**	.09
Satisfaction during program	.05	.05	.09	.10	.10*	.04
Number of observations	232		204		232	
Explained variance ($\bar{R}^2$)	.11		.03		.08	
Intercept	39.51**	3.79	52.70	3.63	45.67**	3.21
Standard error	17.38		15.27		14.13	
Mean of dependent variable	47.33		53.11		50.62	
F-Ratio	3.72**		1.51		2.81**	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-8

Multiple Regression Analysis of
Average Satisfaction With Pay After Programs

Variable	1967		1969		1967-69	
	b	s	b	s	b	s
Male	-3.32	2.63	3.90	2.69	.63	2.13
White	2.35	2.56	.26	2.60	-1.08	2.07
Program						
Diploma completers	-8.67*	3.93	-1.38	3.96	-5.55	3.16
Skill completers	-3.06	4.95	-2.81	5.01	-.95	3.97
Diploma dropouts	-4.68	5.05	1.43	5.68	3.29	4.51
Skill dropouts	-2.69	3.75	.84	4.00	.14	3.21
H.S. - General	-3.48	4.01	3.50	3.71	1.62	3.10
H.S. - Vocational	-.64	4.94	-5.80	4.94	-4.31	4.17
Number of jobs held	2.66*	1.08	-.36	1.12	.07	.60
Job-training relatedness	.22*	.09	.06	.10	.11	.09
Satisfaction during program	.14*	.06	-.02	.17	.11*	.05
Number of observations	232		204		232	
Explained variance ($\bar{R}^2$)	0.06		.00		.01	
Intercept	30.73**	3.91	40.69**	3.98	38.65**	3.31
Standard error	17.66		16.75		14.44	
Mean of dependent variable	38.17		43.35		41.29	
F-Ration	2.29*		.66		1.27	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-9

Multiple Regression Analysis of Average Satisfaction with Opportunity After Programs

Variable	1967		1969		1967-69	
	b	s	b	s	b	s
Male	1.12	2.74	5.74	3.15	4.19	2.54
White	-2.01	2.62	-1.85	3.03	-2.49	2.43
Program						
Diploma completers	-12.41**	4.00	2.88	4.59	-4.20	3.69
Skill completers	5.59	5.04	8.96	5.86	8.44	4.63
Diploma dropouts	-9.05	5.17	-.59	6.64	-7.62	5.28
Skill dropouts	1.63	3.82	1.80	4.68	2.38	3.75
H.S. - General	-2.09	4.00	5.03	4.35	1.56	3.35
H.S. - Vocational	3.55	5.02	-4.00	5.78	-2.92	4.86
Number of jobs held	.58	1.11	-1.17	1.31	-.06	.70
Job-training relatedness	.52**	.09	.14	.11	.29**	.10
Satisfaction during program	.27**	.06	.05	.20	.17**	.06
Number of observations	232		204		232	
Explained variance ($\bar{R}^2$)	0.20		.01		.08	
Intercept	22.28**	3.89	34.63**	4.65	28.66**	3.81
Standard error	18.11		19.61		16.95	
Mean of dependent variable	33.72		39.68		36.82	
F-Ratio	6.39**		.85		2.85**	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-10

Multiple Regression Analysis of Average Satisfaction
with Supervision After Programs

Variable	1967		1969		1967-69	
	b	s	b	s	b	s
Male	.20	2.7	-1.73	2.69	-.18	2.15
White	-.30	2.63	.42	2.59	-2.31	2.08
Program						
Diploma completers	-8.29*	4.02	-4.33	3.96	-6.03	3.17
Skill completers	3.32	5.07	-2.31	5.01	1.86	3.98
Diploma dropouts	-2.75	5.19	-4.73	5.67	-3.02	4.53
Skill dropouts	-6.44	3.85	1.61	4.01	-.01	3.22
H.S. - General	-10.82**	4.05	2.32	3.70	-2.25	3.09
H.S. - Vocational	-7.38	5.03	.39	4.93	-1.73	4.16
Number of jobs held	.90	1.11	-1.59	1.12	-.45	.60
Job-training relatedness	.41**	.09	-.02	.10	.18*	.09
Satisfaction during program	.13**	.05	.04	.11	.04	.04
Number of observations	232		204		232	
Explained variance ($\bar{R}^2$)	.11		.00		.00	
Intercept	50.26**	3.96	57.33**	3.98	53.28**	3.30
Standard error	18.17		16.74		14.55	
Mean of dependent variable	51.68		53.00		53.02	
F-Ratio	3.53**		.75		1.02	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-11

Multiple Regression Analysis of Average Satisfaction with Hours After Programs

Variable	1967		1969		1967-69	
	b	s	b	s	b	s
Male	-1.69	2.75	0.94	2.94	-1.15	2.31
White	.11	2.67	-1.53	2.83	-2.37	2.24
Program						
Diploma completers	-11.66**	4.09	-1.63	4.32	-6.46	3.41
Skill completers	5.22	5.14	4.77	5.47	4.50	4.28
Diploma dropouts	-7.94	5.27	1.37	6.20	.51	4.87
Skill dropouts	-4.21	3.91	6.41	4.38	1.12	3.47
H.S. - General	-9.05*	4.11	2.49	4.05	-1.98	3.32
H.S. - Vocational	-5.33	5.11	5.74	5.39	.53	4.48
Number of jobs held	1.62	1.13	-1.38	1.22	.02	.65
Job-training relatedness	.17	.09	-.02	.11	.14	.09
Satisfaction during program	-.01	.05	.10	.13	.08	.04
Number of observations	232		204		232	
Explained variance ($\bar{R}^2$)	.04		.00		.02	
Intercept	49.62**	4.02	53.31**	4.35	49.22**	3.55
Standard error	18.45		18.28		15.65	
Mean of dependent variable	49.66		51.92		50.45	
F-Ratio	1.93		.63		1.37	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-12

Multiple Regression Analysis of Average Satisfaction with Co-Workers After Programs

Variable	1967		1969		1967-69	
	b	s	b	s	b	s
Male	2.79	2.49	2.47	2.33	2.98	2.02
White	1.64	2.42	.76	2.24	-.02	1.95
Program						
Diploma completers	-3.30	3.70	-4.51	3.42	-4.84	2.97
Skill completers	5.38	4.66	2.25	4.32	2.01	3.73
Diploma dropouts	-1.20	4.77	3.77	4.90	-1.56	4.25
Skill dropouts	1.00	3.54	4.63	3.46	3.04	3.02
H.S. - General	-2.08	3.72	5.83	3.20	2.25	2.89
H.S. - Vocational	-5.79	4.63	7.49	4.26	.74	3.90
Number of jobs held	2.57*	1.02	-.55	.97	.26	.57
Job-training relatedness	.37**	.08	.00	.08	.15	.08
Satisfaction during program	.08	.05	.09	.10	.01	.04
Number of observations	232		204		232	
Explained variance $(\bar{R}^2)$	.08		.03		.01	
Intercept	43.52**	3.64	54.53**	3.44	41.16**	3.10
Standard error	16.70		14.46		13.64	
Mean of dependent variable	54.73		57.57		56.72	
F-Ratio	2.85**		1.61		1.20	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-13

Multiple Regression Analysis of Average Satisfaction with Peoples' Respect for Job After Programs

Variable	1967		1969		1967-69	
	b	s	b	s	b	s
Male	-1.30	2.74	.85	2.87	-.71	2.31
White	.98	2.67	-3.37	2.76	-3.04	2.24
Program						
Diploma completers	-10.88**	4.08	-3.40	4.21	-7.03*	3.41
Skill completers	2.91	5.13	5.91	5.33	3.64	4.28
Diploma dropouts	2.91	5.26	1.98	6.04	4.36	4.87
Skill dropouts	.36	3.90	9.26*	4.27	7.22*	3.46
H.S. - General	-7.55	4.11	4.00	3.94	.73	3.32
H.S. - Vocational	-6.51	5.10	-2.04	5.25	-4.06	4.47
Number of jobs held	1.27	1.13	.07	1.19	.04	.65
Job-training relatedness	.49**	.09	.09	.10	.35**	.09
Satisfaction during program	.04	.05	.14	.12	.07	.04
Number of observations	232		204		232	
Explained variance ($\bar{R}^2$)	.10		.01		.07	
Intercept	44.67**	4.01	51.48**	4.24	47.22	3.55
Standard error	18.41		17.81		15.63	
Mean of dependent variable	51.68		54.06		53.52	
F-Ratio	3.42**		1.15		2.68	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-14

Multiple Regression Analysis of Supervisor Ratings of Occupational Knowledge and Manipulative Skills

Variable	Occupational Knowledge				Manipulative Skills			
	1967		1969		1967		1969	
	b	s	b	s	b	s	b	s
Male	-10.53*	5.07	-9.01	6.06	-6.78	4.58	-4.58	6.00
White	3.29	5.07	5.10	6.17	10.58**	4.59	6.57	6.11
Program								
Diploma completers	-8.18	6.66	-2.19	8.74	-6.39	6.03	4.76	8.66
Skill completers	-6.86	8.19	-1.30	9.88	1.38	7.41	13.44	9.79
Diploma dropouts	-8.79	9.89	-1.76	11.65	-11.94	8.95	11.25	11.54
Skill dropouts	-10.76	7.53	-12.90	10.00	-4.79	6.82	-3.11	9.91
H.S. - General	2.15	7.08	2.82	8.35	2.90	6.41	10.92	8.27
H.S. - Vocational	-3.62	8.49	-1.23	10.93	1.46	7.68	8.08	10.83
Number of observations	101		87		101		87	
Explained variance ($\bar{R}^2$)	.02		.00		.03		.00	
Intercept	63.69**	6.30	55.16**	7.70	60.31**	5.70	50.59**	7.63
Standard error	21.42		24.35		19.38		24.12	
Mean of dependent variable	55.16		52.18		61.30		58.23	
F-ratio	1.26		.73		1.38		.84	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-15

Multiple Regression Analysis of Supervisor Ratings of Personal - Social Qualities and Work Habits

Variable	Personal-Social Qualities				Work Habits			
	1967		1969		1967		1969	
	b	s	b	s	b	s	b	s
Male	-5.91	5.41	-3.41	6.55	-5.57	4.69	-.66	6.39
White	9.14	5.41	4.87	6.67	11.78*	4.69	4.66	6.51
Programs								
Diploma completers	4.21	7.12	9.65	9.45	-3.49	6.17	4.48	9.21
Skill completers	8.84	8.75	13.14	10.68	7.73	7.58	9.03	10.42
Diploma dropouts	-6.59	10.57	14.40	12.59	-17.50*	9.15	8.32	12.28
Skill dropouts	3.38	8.05	-.64	10.81	-3.86	6.97	-11.70	10.54
H.S. - General	6.45	7.56	11.91	9.02	10.24	6.55	8.90	8.80
H.S. - Vocational	5.09	9.06	11.76	11.82	8.76	7.85	6.12	11.53
Number of observations	101		87		101		87	
Explained variance ($\bar{R}^2$)	.00		.00		.11		.00	
Intercept	57.53**	6.73	45.57**	8.32	59.62**	5.83	49.07**	8.12
Standard error	22.88		26.32		19.82		25.67	
Mean of dependent variable	63.21		54.84		65.11		55.44	
F-ratio	.86		.64		2.52		.70	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-16

Multiple Regression Analysis of Supervisor Ratings of Overall Performance and Overall Preparation

Variable	Overall Performance				Overall Preparation			
	1967		1969		1967		1969	
	b	s	b	s	b	s	b	s
Male	-.53	.51	-.36	.64	-.25	.68	.64	.70
White	1.07*	.51	.65	.66	.39	.68	.10	.72
Program								
Diploma completers	-.57	.66	.55	.93	1.14	.90	.50	1.01
Skill completers	.54	.82	1.20	1.05	1.65	1.10	-.70	1.15
Diploma dropouts	-1.20	.99	1.30	1.24	-.41	1.33	1.60	1.35
Skill dropouts	-.07	.75	-1.17	1.06	1.38	1.02	-1.94	1.16
H.S. - General	.46	.71	.94	.89	2.66**	.95	1.00	.97
H.S. - Vocational	.63	.85	.63	1.16	.24	1.14	1.75	1.27
Number of observations	101		87		101		87	
Explained variance $(\bar{R}^2)$	.02		.00		.04		.05	
Intercept	5.83**	.63	4.68**	.82	3.93**	.85	4.10**	.89
Standard error	2.14		2.59		2.39		2.82	
Mean of dependent variable	6.21		5.38		5.05		4.79	
F-ratio	1.26		.96		1.58		1.54	

*Significant at p. = .05
**Significant at p. = .01

TABLE B-17

Multiple Regression Analysis of Favorability Toward Self Scale of Adjective Check List

Variable	1967		1969	
	b	s	b	s
Male	-.67	1.48	-2.39	1.68
White	-4.54**	1.48	-2.56	1.65
IQ	.20**	.06	.07	.07
Program				
Diploma completers	.76	2.11	2.95	2.37
Skill completers	-1.06	2.77	.01	3.11
Diploma dropouts	2.83	3.04	4.22	3.95
Skill dropouts	2.58	2.26	-3.73	2.70
H.S. - General	3.03	2.16	2.91	2.41
H.S. - Vocational	3.43	2.54	6.54**	2.94
Number of observations	212		173	
Explained variance $(\bar{R}^2)$	.07		.07	
Intercept	30.43**	5.98	42.88**	7.06
Standard error	9.78		10.10	
Mean of dependent variable	48.14		48.77	
F-ratio	2.84**		2.35**	

*Significant at p.= .05

**Significant at p.= .01

APPENDIX C

INDIVIDUAL AND SOCIAL COSTS OF THE EXPERIMENTAL PROGRAMS

The cost of education can be defined, in the broadest sense, as the loss of welfare (foregone earnings, loss of leisure time, etc.) associated with obtaining an education. Such welfare loss, however, can be considered from many different perspectives and levels of analysis. Since education is of such obvious importance to both the individual recipient and the community, the costs incurred in obtaining and supplying such education can be examined from two major points of view--the expenditures incurred by the individual student and the costs borne by the community, which support the educational institutions that make instruction possible. These costs are referred to, respectively, as the private and social costs of education.

Since the basic orientation of this appendix involves an economic evaluation of costs, a few words, at the outset, concerning some of the conceptual problems facing the analyst might be beneficial.

The determination of explicit cost such as tuition and teacher's salaries present little, if any, problems. The major conceptual problems arise, however, when we attempt to ascertain the implicit costs of education. For the individual student, the most important element of implicit cost is foregone earnings. Assuming that the choice of education was freely undertaken by the student, the amount of earnings which the individual foregoes as a result of attending class, as opposed to active labor force participation, is an opportunity cost. The resultant loss of earnings, therefore, must be imputed to him if we are to obtain an accurate measure of cost. If, however, the students' education is not a result of free choice, but is of mandatory nature, due to child labor laws or compulsory education, foregone earnings are non-existent and no opportunity cost estimation can be made. For the present study the participants did have such choice and therefore opportunity cost estimation is legitimate.

On the societal level, foregone earnings also represent an opportunity cost. On the assumption that earnings are a measure of productivity, foregone earnings represent the marginal productivity of the individual which is lost to society as a result of the individual remaining outside the labor market. When estimating the opportunity cost to society of foregone earnings, however, there are two caveats to keep in mind.

If a substantial number of students moved into the labor market, the resulting increase in the labor supply would be expected to reduce the marginal productivity of labor. Moreover, if unemployment prevails in the labor market, additions to the labor supply could result, not in increased productivity but in increased unemployment. Therefore estimating foregone earnings prior to such a change in the labor force would result in an overestimate of the social opportunity costs.

These considerations are not intended to negate the validity of estimating social opportunity costs. On the contrary, from the standpoint of the community, an analysis should still attempt to determine what could be produced in a full employment economy. What has been said here, is simply intended to indicate the limitations involved in developing imputed measures of education costs.

Another element of implicit costs is job search costs. If the length of time necessary to procure employment is functionally related to the various types of education curricula, then the loss of earnings incurred while seeking out employment should be attributed to the respective educational or training program. The method employed in such cost determination is to estimate the length of time it takes to find a job and multiply the figure by the amount of earnings that could have been received had employment been obtained more quickly. This will then yield the marginal difference in length of job search and the welfare loss of earnings attributable to particular curriculum.

Framework of the Analysis

In this appendix, the concern is focused primarily on the costs of the two experimental education programs conducted as part of this study--the skill training program and the high school diploma program--the goal being to estimate the total and per student costs of education on both a societal and individual basis. Given the conceptual problems mentioned above, the following major costs items should be included in any attempt at estimating the costs of education.

A. Social costs

   1. Current costs which include such items as teachers salaries, utilities and other variable costs.

   2. Capital costs of buildings and facilities.

3. Earnings foregone while students under instruction.

4. Job search costs.

B. Private costs

1. Tuition paid, if any.

2. Earnings foregone while students undergo instruction.

3. Job search costs.

With respect to the present study, two alterations will be made to the above test. Since there was no cost to the students who enrolled in the programs, tuition can be eliminated from consideration. Secondly, under social costs, the capital cost entry can be eliminated as already existing public school facilities were used for the programs. Therefore the only explicit cost item to be considered are current operating expenditures.

Total Current Costs: Since there are no capital costs to be accounted for, the simple summation of current operating expenses will yield a total cost figure. These figures can be found in Tables C-1 and C-2. While cost categories are not fully comparable, due to different itemizing techniques employed for the two programs, all essential costs are present. It will be noticed that the cost of the skill training program was $20,878 more than the high school program. The average cost per skill areas was $21,177.

Costs Per Student: Costs per student can best be estimated by dividing the total cost figures by the average monthly attendance for the two programs. In this way, a more accurate estimate of variable cost is obtained than would be possible using simple enrollment data. The relevant attendance and enrollment figures was presented in Chapter 2,Table 6 and the costs per student appears in Table C-3. As can be seen from these tables, the cost per student of the skill training program was almost three times higher than the diploma program, due to higher costs in all areas and lower attendance figures.

To obtain final figures for the costs of the two educational programs we must now add to the current cost figures, the implicit opportunity costs of foregone earnings and job search costs.

TABLE C-1

Expenditures for High School Diploma Program September 1965 to September 1966

Instructional Services	
Instructional salaries, including supervision	$17,450.00
Instructional supplies, including shipping costs	3,773.17
Rental of instructional equipment	2,230.87
Guidance and counseling salaries	8,075.76
Other allowable items	3,165.54
Total	$34,695.34
Fixed Charges	
Rental of nonpublic space	--
Employer share of employee benefits	2,135.28
Total	$ 2,135.28
Equipment Maintenance and Repair	
Repair and servicing of equipment	150.00
Other maintenance and repairs	106.50
Total	$ 256.50
Other Costs Not Elsewhere Classified	
Utilities	2,647.53
Custodial or janitorial salaries	2,758.00
Trainee transportation	159.00
Total	$ 5,564.53
Total current costs	$42,651.65

Source: Project records

TABLE C-2

Expenditures for the Skill Training Program
September 1965 to September 1966

	Radio & Appliance Repair	Data Processing	Merchandising	Total All Programs
Instructional Services				
Instructional salaries	$10,008.00	$ 9,644.90	$ 9,297.50	$28,950.40
Guidance and counseling salaries[a]	1,794.61	1,794.61	1,794.61	5,383.83
Local supervision[a]	1,687.50	1,687.50	1,687.50	5,062.50
Total	13,490.11	13,127.01	12,779.61	39,396.73
Fixed Charges				
Rental of nonpublic space	1,373.00	958.00	1,197.00	3,528.00
Employer share of employee benefits	190.49	199.94	184.30	574.73
Total	1,563.49	1,157.94	1,381.30	4,102.73
Equipment and Supplies				
Total	3,351.70	4,449.50	2,569.77	10,370.95
Other Costs Not Elsewhere Classified				
Utilities[a]	942.38	942.40	942.42	2,827.20
Trainee transportation[a]	2,277.48	2,277.48	2,277.54	6,832.50
Total	3,219.86	3,219.88	3,219.96	9,659.70
Total Current Costs	$21,625.16	$21,954.31	$19,950.64	$63,530.11

Source: Project records.

[a] Total costs for guidance counselors, local supervision, utilities, and trainee transportation were divided equally among the three skill areas and not adjusted for number of students in these areas.

TABLE C-3

Current Cost Per Student of the Diploma and Skill Training Program

	Diploma Program	Skill Training Program
Total cost	$42,651.65	$63,530.11
Average monthly attendance	59.0	30.5
Costs per student	$ 722.91	$ 2,082.95

Foregone Earnings: To determine the loss of earnings incurred by the diploma and skill training students, a comparison is made with the control group, which was similar in socio-demographic characteristics, but received neither skill training nor a diploma. Given the assumption of comparability between groups, the amount of earnings attained by the control group during the period of the programs constitutes the loss of earnings to those who remained outside the labor market while undergoing instruction. Since, in actuality, some members of the skill and diploma groups did hold down employment positions, monthly on a part-time basis, the net difference in total earnings between the control group and the training program participants constitutes the opportunity cost of foregone earnings. This information can be found in Table C-4.

TABLE C-4

Opportunity Cost of Foregone Earnings

	Control	Skill	Diploma
Average total earnings[a]	1,834.18	579.87	936.87
Opportunity cost		1,254.31	897.31

[a] Total earnings during the program was estimated from job history data using the formula given in Appendix A. Average total earnings is simply total earnings divided by the number of participants in each group.

Of the three groups, the control group, as expected had a much larger percentage of its members employed, relative to the skill and diploma groups. The higher opportunity cost for the skill group can be attributed to the lower employment and generally lower wages experienced by this group as compared to the diploma students. The relevant employment figures was 54 percent for the control group and 32 and 28 percent for the diploma and skill groups, respectively.

Job Search Costs: Job search costs, as already mentioned, constitute the loss of earnings associated with seeking employment. In this study, job search costs were estimated for the thirty-three month period following the training program and, therefore, include the loss of earnings suffered while changing jobs and during subsequent periods of unemployment.

When estimating job search costs, however, it must be kept in mind that such estimation must be accomplished on both a societal and private level. The loss of productivity to society during periods of job search is reflected by total and average cost per job, while the individual's loss is best measured by the average loss of earnings per person. Table C-5 includes the respective cost figures.

TABLE C-5

Job Search Costs

	Skill	Diploma
Total cost	13,930.99	33,021.24
Average cost per job[a]	240.19	317.51
Average cost per job per person	340.07	282.78

[a] Estimated from job history data.

It will be noticed that the average cost per job is lower for the skill group. This is due to the fact that the skill group, as a whole, experienced more jobs per person relative to the diploma group, thereby tending to lower the average cost per job. Conversely, the greater number of jobs per person was also accompanied by longer and more numerous periods of unemployment which resulted in a greater loss of earnings for the skill graduate on a per person basis.

When imputing job search costs in this manner, however, it should be kept in mind that such cost estimation is a relatively crude measure of opportunity cost. Such imputation fails to take into account such explicit job search costs as transportation to and from job interviews, employment agency fees, and other incidental costs. Moreover, if the services of private agencies were used in seeking employment there is no way to ascertain to what degree the students were reimbursed for the cost of their agency fees when finally obtaining a job. Therefore, given the unavailability of this data, such job search determination is at best only a rough approximation and should be interpreted as such.

Summary

Once the cost elements have been accounted for, it is necessary to combine the various cost items and determine the total cost of the two educational programs. As in the previous estimates the total figures are provided on both a social and private basis in Tables C-6 and C-7.

These cost figures refer to the expenditures incurred in conducting the specific types of educational training programs undertaken in this study. Because of higher instructional costs and the difference in the retention rates of the two programs the per student costs of the skill program are much higher. However when total social costs, including the foregone earnings of the students, are considered, the diploma program was the more expensive.

One final word of caution: Although the figures in the analysis have been calculated to the cent, it should be noted that the estimate for foregone earnings and job search costs were obtained from the follow-up data. Since it was not possible to interview all the subjects in the original groups, the averages calculated from those interviewed were extrapolated to the total groups. The figures in Tables C-4 through C-7 should thus be considered as the best estimates available but not the exact figures that a complete follow-up would have yielded.

TABLE C-6

Total Social Costs

	Skill	Diploma
Total current operating expenditures	$63,530.11	$42,651.65
Foregone earnings	36,374.99	53,838.60
Total job search costs	13,930.99	33,021.24
Total social costs	$113,836.09	$129,509.49

TABLE C-7

Social and Private Costs Per Student

	Social Costs		Private Costs	
	Skill	Diploma	Skill	Diploma
Current operating expenditures per student	$2,082.95	$ 722.91		
Foregone earnings	1,254.31	897.31	$1,254.31	$ 897.31
Average job search costs per job	240.19	317.51		
Average job search costs per job per person			340.07	282.78
Totals	$3,577.45	$1,937.73	$1,594.38	$1,180.09

APPENDIX D

INSTRUMENTS USED IN FOLLOW-UP INTERVIEWS

Subject Schedule

Listed below are the questions included in the interview schedule used in the 1967 and 1969 follow-ups of subjects who participated in the study. The two schedules were identical for some items but where there were differences the form asked in the separate years is indicated in parentheses. The spaces for recording answers and most of the instructions to interviews have been deleted.

1. Looking back on (the Penn State program; your high school education) do you feel that it was worthwhile to you personally?
   In what ways?

2. (1967) What do you think could have been done to make it better?

2. (1969) Do you feel that you got out of it what you hoped you would get when you started?
   What was this?
   Why not?

3. (1969) If you could go back in time to when you started, would you do the same thing over again?
   a. What would you do differently?

3. (1967), 4 (1969) How much education do you think is necessary for a person to get along in the world?
   a. Do you think it is possible for everyone to get this much schooling?

4. (1967) How good a job do you think a person should try to get?

5. What do you think are the most important things in a person's life?

6. What do you want to get out of life?

7. What sort of a person would you really like to be?

8. What kind of a neighborhood would you like to live in?

9. If things went pretty well for you in the future, what kind of a job would you really like to get?

10. What kind of job do you think you actually will get in the future?

11. How much money per week would you need to earn to barely get along in life? (PROBE: IF FIGURE IS LOW, ORIENT TOWARD FUTURE WHEN THEY WILL BE ON THEIR OWN)

12. How much per week would you need to be really well off?

13. How much money per week do you really expect to earn?

14. How much control do you think you have over your future?

Now, I would like to ask you some questions about any jobs which you have held since [(1967) September, 1965; (1969) you were last interviewed (DATE ON CARD)]. This includes both full-time jobs and part-time jobs, no matter how many hours you worked per week or how long the job lasted. Working at different jobs for the same employer, such as getting promoted to a better job in the same company, counts as having a different job. I would also like to know about each time period when you had no job, and what you were doing when you had no job. Let's start with now.

15. Are you working now:
    a. What are you doing now?

    aa. What job-hunting sources are you using?

    ab. Are you looking for a particular type of job?

    ac. Do you have in mind some minimum pay that you will not go below?

16. For whom are you working now?--OR--For whom did you last work? (All jobs and periods of unemployment during follow-up were listed.)

    a. Employer

    b. Dates Employed

    c. Dates Unemployed

    d. Activity While Unemployed

    e. We would like to ask your current (or last) supervisor a little about your job. Could you tell us his full name?

COMPLETE JOB HISTORY FORM PAGES 4 AND 5 FOR EACH JOB LISTED ABOVE

17. How many weeks did you have to look before getting this job?

18. Did you look for any particular type of job? (If "YES," what type of job?)

19. Do you feel that your participation in the Penn State program helped you to decide on the type of job you wanted?

20. When you were looking for a job, did you have in mind some hourly wage or minimum salary that you would not go below? (IF "YES," how much?)

21. When you were looking for this job, what job-hunting sources did you use?

22. How did you find this job?

23. When you were looking for a job, where did you get money to live on?

24. What does (employer's name) do?

25. In what city does this employer operate (where subject worked)?

26. Which of the following things did this employer do before hiring you?

27. What (was, is) your job title?

28. What (did, do) you do on this job?

29. What (was, is) your gross pay (per hour)? Before deductions for taxes, social security, etc. If you received tips, include an estimate of these. (GET BOTH STARTING & CURRENT OR LEAVING)

30. How many hours a week (did, do) you work? (AVERAGE, IF NOT REGULAR HOURS)

31. GIVE RATING CARD. Using this card, tell me how you would rate each of the job areas for this job. Please read the instructions carefully. As you can see, you choose a "1" to show that you were completely dissatisfied, and a "7" if you were completely satisfied. Numbers between 1 and 7 show feelings somewhere between complete dissatisfaction and complete satisfaction. In general, higher numbers show greater satisfaction.

32. On this job, how often (did, do) you use the things you learned in (the Penn State program, high school)?

33. When you took this job, about how long did you expect to stay in it?

33a. PROBE: What were your main reasons for this answer?

(34 & 35 NOT FOR CURRENT JOB BUT FOR LAST JOB IF CURRENTLY UNEMPLOYED)

34. What were the most important reasons in your decision to leave this job?

35. What were your job plans for the immediate future when you left this job?

(GIVE JDI BOOKLET AND PENCIL)

36. I have here a booklet of words and phrases describing different aspects of a job. I would like you to fill this out to describe your (current, last) job, (READ INSTRUCTIONS WITH SUBJECT) "This booklet contains a list of words and phrases that can be used to describe a job. At the top of each page a particular area of the job is listed. The words on the page may or may not describe this area of your job. Put a Y for "Yes" in front of each word or phrase that actually describes your job in that area. If the word does not describe your job, put an N for "No." If you cannot decide whether the word describes your job or not, put a question mark (?) in front of it. (For contents of JDI see Smith, et al. 1969)

(TAKE BACK JDI BOOKLET)

37. (1967) How far did your father go in school?

38. (1967) How far did your mother go in school?

39. (1967) How far did your brothers and sisters go in school?

40. (1967) How far did most of your close friends go in school?

41. (1967), 37 (1969) What is the job status of most of your close friends?

42. (1967) Did any of your family or friends try any training outside of regular school, such as correspondence courses, trade school, business school, etc.

    a. Who was this?

    b. Did he or she finish the course?

43. (1967), 38 (1969) How well do you think that your family understands and accepts each other?

44. (1967), 39 (1969) Which member of your family do you feel closest to?

45. (1967) Do you feel that you get along with your family better or worse now than you did before you left (the Penn State program; high school)--or is it about the same?

46. (1967) When you were in high school, did your parents try to get you to go to school and to study, or did they think that school and studying were a waste of time, or didn't they seem to care one way or the other?

47. (1967), 40 (1969) Who has been the single most important person in your life?

48. (1967) Who has influenced you most in your decisions about schooling?

49. (1967), 41 (1969) Who has influenced you the most in decisions about jobs?

(50 to 53 ASKED DROPOUTS ONLY)

50. (1967) When you first started to think about leaving school for good, how did your parents feel about it?

51. (1967) How did your parents feel about your signing up for the Penn State program?

52. (1967) Were you married at the time you decided to sign up for the Penn State program?

52a. If yes, how did your (wife, husband) feel about your decision to sign up for the Penn State program?

52b. Did (she, he) try to help you stay in the program, did (she, he) want you to quit, or didn't (she, he) seem to care if you stayed or left?

53. (1967) What one or two specific things happened which led you to leave school for good?

54. (1967), 42 (1969) Have you taken part in any education or training program since you were last interviewed?

   a. What did the program train you for?

   b. When did you start taking this course?

   c. When did you stop taking this course?

   d. What type of course (was, is) it?

   e. What type of training (was, is) involved?

   f. Did this program help you get a job?

55. (1967), 43 (1969) How much do you think a person should plan ahead for the future?

56. (1967), 44 (1969) Do you ever think that you are getting a dirty deal from life?

57. (1967, 45 (1969) What is your favorite free-time activity? That is, what do you do when you don't have anything you especially _have_ to do?

58. (1967), 46 (1969) How do you feel about the people your age who seem to "have it made" (in college or have a good job, have lots of money, etc.)?

59. (1967), 47 (1969) Who is the most successful person whom you personally know?

    a. What is this person's relationship to you?

    b. Why is this person successful?

60. (1967), 48 (1969) If somebody handed you $500 tomorrow, what do you think you would do with it?

61. (1967), 49 (1969) Do you read any newspaper on a regular basis (at least every other day)?

62. (1967), 50 (1969) Do you read any magazines regularly?

    a. Which ones?

    b. What features do you like in each of these?

63. (1967), 51 (1969) What TV shows do you regularly watch?

64. (1967) 52 (1969) Are you a union member?

    a. Do you hold office in this union?

    What office?

    b. Do you ever attend meetings?

    c. When was the last meeting you attended? (DATE)

65. (1967), 53 (1969) Unions try to do a lot of different things. Which of these things I'm going to read do you think is most important? (MARK WITH AN "M")--and which is least important? (MARK WITH AN "L")

    Get more pay for its members
    Provide special services for it's members

Try to elect politicians who favor the working man
Stand up to management for workers' rights

66. (1967), 54 (1969) Are you over 21 years old?

   a. Do you plan to vote regularly after you reach 21?

   b. Have you ever voted?

   ab. What election was that? (Date)

   bb. What major offices did you vote on in that election?

   bc. Did you use a voting machine or ballot box?

67. (1967), 55 (1969) In what year will the next presidential election be held?

68. (1967) If you had to make a guess who do you think the candidates will be?

69. (1967), 56 (1969) Who is the Vice President of the United States?

70. (1967), 57 (1969) Who is the governor of Pennsylvania? Who are the senators from Pennsylvania?

71. (1967), 58 (1969) In your opinion, what are the most important problems facing the United States?

72. (1967), 59 (1969) In your opinion, what is the most important problem facing your home town?

73. (1967), 60 (1969) Are you married?

   a. PROBE: How many children do you have?

   b. Does your (wife, husband) work?

74. (1967) Is your father living?

   a. Does your father have a job?

   aa. Type of company

   ab. Job title

   ac. Pay

   ad. Hours

   ae. How long has he held this job?

75. (1967) Is your mother living?

  a. Does your mother have a job?

  aa. Type of company

  ab. Job title

  ac. Pay

  ad. Hour

  ae. How long has she had this job?

76. (1967) Do you live with your mother, father, both or neither?

77. (1967) Are they divorced or separated?

(In addition to this schedule the respondents completed the Adjective Check List, Gough and Heilbrun, 1965)

Supervisor Questionnaire

Listed below are the items from the supervisor questionnaire that was completed by the direct supervisor named by the subjects. The spaces for recording answers have been deleted.

Employee: ________________________________

1. Through what source of recruitment was this employee hired?

2. What is (was) this employee's job title?

3. What are (were) this employee's duties?

4. How many hours does (did) this employee work? ____hours per week (AVERAGE, IF NECESSARY)

5. This employee has told us that his (her) pay scale is (was) $_____ per hour, week, month, Is this correct?

   What is the correct figure?

6. Is a high school education necessary for the performance of this job?

7. Do you require a high school diploma of all applicants for this job?

8. Is any kind of special training necessary for this job?

   a. What kind of training?

b. Do you do this training yourself or do you require previously trained applicants?

9. How long has this employee worked for you?

10. Do you expect any layoffs in the near future?

Is this employee likely to be laid off?

11. If you were designing a training program for young people like this employee, what do you think should be contained in that program?

Please use the following scale to rate the job performance of this employee. We would like your frank evaluation. Neither the person rated nor anyone connected with your organization will ever see these ratings. They will be used by The Pennsylvania State University to help determine the employment needs of young people.

This scale lists four general areas of work performance. Under each general area there are descriptions of certain worker traits. Rate the employee by circling the number that best describes this employee on this trait. Higher numbers indicate superior performance. If you circle a "1" after a given trait, this places the employee among the worst you have ever supervised, in terms of this trait. If you circle a "9", this places the employee among the best you have ever supervised, in terms of this trait. If you feel that this trait is Not Applicable to this employee's job, circle "NA". (After each of the items listed below there was a rating scale with the digits 1 to 9. The 1 was anchored with a minus sign (-) and the 9 with a plus sign (+).)

AREA A: OCCUPATIONAL KNOWLEDGE

1. Technical knowledge and understanding shown in work

2. Understanding of mathematics related to work

3. Understanding of sciences related to work

4. Communication skills: ability in oral, written, and mechanical techniques of communicating.

AREA B: MANIPULATIVE SKILLS

1. Quality of work: ability to meet quality standards

2. uantity of work: output of satisfactory work

3. Job know-how: application of acquired knowledge and skills

4. Proper use of tools and equipment

5. Correct selection and care of materials and supplies

AREA C: PERSONAL AND SOCIAL QUALITIES

1. Cooperativeness: ability to work together with people

2. Self-control: ability to control one's emotions

3. Reaction to advice and constructive criticism

4. Adaptability: capacity to adjust to new problems and changing situations

AREA D: WORK QUALITIES AND HABITS

1. Industry: personal application to work assigned

2. Dependability: thorough completion of a job without supervision

3. Safety habits: minimizing chances for accidents

4. Attendance: reporting for work regularly

5. Punctuality: reporting for work on time

SUMMATION:

1. Rate the employee's overall performance on this job:

2. Rate the employee's overall preparation for this job:

Finally we would like some classification information about your company.

12. What is your major product or service?

13. Approximately how many people do you employ?

    a. About what percentage of your employees are women?

    b. About what percentage of your employees are non-white?

14. Is this an independent organization, or is it a division of a larger organization?

15. Is this company unionized? What union is this?

THANK YOU FOR YOUR COOPERATION.

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